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Presented by

Jos. Reeves M. D.

SIMILIA SIMILIBUS CURENTUR

TRANSACTIONS

OF THE

FORTY-THIRD SESSION

OF THE

HOMOEOPATHIC MEDICAL SOCIETY

OF THE

STATE OF PENNSYLVANIA

Held at the Hahnemann Medical College, Philadelphia
September 6, 7, and 8, 1906

LANCASTER, PA.
THE EXAMINER PRINTING HOUSE
1906

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Corresponding Secretary, .Edward M. Gramm, M. D.,
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Treasurer, ...Ella D. Goff, M. D.,.....Allegheny.
Necrologist, ...Chandler Weaver, M. D., Philadelphia.

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(3 yrs.) G. W. Smith, M. D., ...Philadelphia.
(2 yrs.) H. F. Schantz, M. D., ...Reading.
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Trustees.
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do O. S. Haines, M. D., ...Philadelphia.
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(2 yrs.) W. A. Seibert, M. D., ...Easton.
do W. H. Keim, M. D., ...Philadelphia.
do Clarence Bartlett, M. D., Philadelphia.
(1 yr.) D. C. Kline, M. D., ...Reading.
do H. B. Ware, M. D., ...Scranton.
do I. B. Gilbert, M. D., ...Philadelphia.

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Treasurer, ...Ella D. Goff, M. D.,.....Allegheny.
Necrologist, ...Chandler Weaver, M. D.
(since deceased.)

Censors,
(3 yrs.) C. E. Myers, M. D., ...Philadelphia.
(2 yrs.) G. W. Smith, M. D., ...Philadelphia.
(1 yr.) H. F. Schantz, M. D., ...Reading.

Trustees,
(3 yrs.) J. J. Tuller, M. D., ...Philadelphia.
do D. C. Kline, M. D., ...Reading.
do G. A. Mueller, M. D., ...Pittsburgh.
(2 yrs.) C. P. Seip, M. D., ...Pittsburgh.
do O. S. Haines, M. D., ...Philadelphia.
do D. P. Maddux, M. D., ...Chester.
(1 yr.) W. A. Seibert, M. D., ...Easton.
do W. H. Keim, M. D., ...Philadelphia.
do C. Bartlett, M. D., ...Philadelphia.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Publication herewith presents the Transactions of the Forty-third Session of the Society, held at Philadelphia.

Three papers which were read before the Society were refused to the Committee for publication. Two of them were read by members of the Society and one by a non-member who was invited to present a paper.

E. M. Gramm, M. D., *Chairman;*
Ella D. Goff, M. D.,
G. B. Moreland, M. D.

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TRANSACTIONS

OF THE

FORTY-THIRD SESSION

OF THE

Homœopathic Medical Society

OF THE

STATE OF PENNSYLVANIA.

Held at the Hahnemann Medical College,
Philadelphia, September 6, 7 and 8, 1906.

The President, C. P. Seip, M. D., called the meeting to order on the morning of September 6, 1906.

The divine blessing was invoked by the Reverend W. B. Chalfant, D. D., pastor of St. Matthew's M. E. church, of Philadelphia.

J. J. Tuller, M. D., President of the Homœopathic Medical Society of the County of Philadelphia, delivered the following

ADDRESS OF WELCOME.

Mr. President, Ladies and Gentlemen, Members of the State Society and Our Visiting Friends:

As the President of the Homœopathic Medical Society of the County of Philadelphia, I have been delegated to welcome you on this occasion. I assure you that it gives me great pleasure to receive you into our city again after four years' absence. In the past four years many changes have taken place in the city, among them a political revolution that has rendered the city cleaner and of higher moral standing, I think I can say, than any other city in this country. We have a clean, good city to receive you; but I want to give you a word of caution, that, in a general way, you want to be

careful of typhoid. We have not yet cleaned up the water. Those of you who drink in this city should be careful what you drink.

I know of no more fitting place than Philadelphia to entertain the State Society. I know of no better place to receive the members of the profession than in this building, where a large percentage of you received your professional birth. You meet again to study scientific subjects under the roof of this building. To be associated again with these surroundings and the opportunities for scientific investigation, even for a short period, should certainly be a great pleasure to the members of this society. We have made many improvements in the past four years since you were here. The members of the profession in this city will take great pleasure in showing you the improvements that have been made in the city generally and in our hospital; the new clinical amphitheatre and the separate buildings that have been erected for our better equipment for the treatment of patients of every description.

A strong opportunity presents itself here for scientific investigation, and this programme is certainly filled with the most scientific subjects treated by some of the best men that have been on the programme in many years. Fortunately we have a strong, young element that presents itself this year. I say fortunately, because from the young element of the profession of to-day comes the truly scientific basis of our work, and we are forced now to turn to the young men of our profession to develop this basis. I want to ask you as a society to receive the younger element into this body, and to give them your support in every way.

In a meeting of this character there is another very strong point that presents itself, and that is the social obligation. We must recognize the fact that while scientific investigation is a necessity and is the first object of our meeting, without strong recognition of the social obligation on the part of the members, it is difficult to make the society a success. This must not be forgotten. Let every man come with an enthusiastic desire to fill his social as well as his scientific, position in the State Society. In this way we can make a scientific and social success. It is very important that the families of the physicians present from all parts of the State should come socially in contact with each other; should become acquainted with each other, and should become friends, because they are all interested in the same cause. I, therefore, say to you that the social

element of the State Society is one of the strongest factors that we have to consider, and I really think it would be a most excellent plan to create a committee that should be large enough, strong enough, enthusiastic and active enough to look after the social element of the society wherever it meets throughout the State, and make a success of this part of our meetings.

Again, I say, on the part of the citizens of Philadelphia and on the part of the profession of this city, I want to extend to you the warmest welcome, and I want you to realize that if anything has been left undone, it is not from the heart, it is absolutely an oversight. We thank you for your presence.

Dr. Z. T. Miller, of Pittsburgh, thereupon delivered the following

ADDRESS OF WELCOME.

Everybody belonging to the State Society who comes to Philadelphia feels that when he gets here he is at home, and that is especially true of the men who studied in the little church on Filbert Street twenty-five or thirty years ago, and in this building; Edmundson and a few others from Pittsburgh, who are at the top of the heap and millionaires now, when they come back to Philadelphia feel as though they were at home, and I do not think any physician in Philadelphia can say anything that will make us believe any more firmly than we now believe that when we come here we are always perfectly welcome, and can expect to have a good time.

The President, C. P. Seip, M. D., of Pittsburgh, delivered the following

ADDRESS OF THE PRESIDENT.

Members of the Homœopathic Medical Society of Pennsylvania:

Before proceeding I desire on behalf of the Society to extend to the members of our kindred associations present and to our unaffiliated friends our cordial greetings and welcome. We trust they will have a pleasant and profitable time with us, and participating, will give us the pleasure and profit of hearing from them.

On my own behalf I must first thank the Society for the high honor done me in making me its president. The characters of the constituent members of our association with whom I have for many years been identified in the faith and practice of Homœopathy as

unified in the Society make it a very great honor to be selected as its official head. Of that I beg to assure you I am fully sensible and appreciative. If I shall in any particular fall short of your desire, or expectation of the requirements of my office, it, at least, shall not be because of indifference or willful neglect, but rather because my faculties as conditioned were incapable of more efficient service.

This Society was organized in the city of Pittsburg in June, 1866, at the same time the American Institute of Homœopathy met in the same place. Thus we have practically a repetition of forty years ago; the American Institute of Homœopathy will convene at Atlantic City after adjournment of this Society.

In this time so much has been accomplished as to encourage the hope of greater usefulness for the future and to promote the ambition to participate alike in the credit and in the benefits.

Greatly as these bodies have wrought and prospered, and widely as their influence has spread, much more remains to be done. Our interests can not be separated or disassociated from those of the public. In promoting the public interest we promote our own. While anything remains undone to protect the public health against unlicensed, incompetent, unscrupulous practitioners, the regular practitioners, though possessing legal qualifications and duly licensed, suffer with the public.

Our influence has helped to shape the laws, establishing a standard of qualification, "a good moral character, thorough elementary education, a comprehensive knowledge of human anatomy, human physiology, pathology, diagnosis, chemistry, materia medica, obstetrics and practice of medicine and surgery and public hygiene." The same for all candidates except in therapeutics, materia medica and practice of medicine. Also prohibiting practice without a diploma and requiring a license, both for permanent and transient practitioners, and registration in the medical register kept in the office of the prothonotary of the county practiced in; and creating a medical council of the State of Pennsylvania and three State boards of medical examiners over which it has supervisory power. One board of medical examiners representing the Medical Society of Pennsylvania, one the Homœopathic Society of Pennsylvania and one the Eclectic Medical Society of Pennsylvania; the examinations of candidates being on prescribed lines. Penalties are provided for violation of the law, and the standard and the machinery to secure the

operation and enforcement of the law seem good as far as they go, but the public and the regular profession of medicine are still insufficiently protected. There are innumerable patent medicines compounded by unknown and irresponsible people and sold as panaceas for all the ills that flesh is heir to. The law should require that every package show the constituents and proportions by formula and prescribe a standard of qualification for the vendors or compounders in like manner as is now provided for pharmacists and clerks who fill prescriptions, with compulsory requirements for examination, diploma, license and registration of candidates.

Existing laws already mentioned are evaded by persons resident here or from other States practicing in this State under cover of a regularly licensed and registered practitioner whose impecuniosity prevails with him to aid the evasion, but as that is a matter of evidence, it is not believed that legislation can prevent it. Evidence being had would, of course, establish the culpability of both.

In our courts the requirements of the law can not be evaded, a charter was refused, the evidence showing that the purpose of the incorporators was not merely to establish a form of worship, but to train persons for the treatment of disease simply and solely by inaudible prayer in the presence of the sick or at a distance. That to qualify for the practice of healing disease nothing was necessary but to study the system taught in Mrs. Eddy's book, without any knowledge of anatomy, physiology, pathology and hygiene being required. (First Church of Christ Scientist, 205 Pa., pp. 543, 1903.)

When that Church originally applied for a charter in 1903 it was refused by the Court of Comon Pleas No. 2, of Philadelphia county, where, in an interesting opinion by Pennypacker, Presiding Judge, now Governor of the State, the rule was laid down that although no question can arise when the purpose of a proposed corporation is only to inculcate a creed, or to promulgate a form of worship, as under the Constitution of Pennsylvania, there can be no interference with the freedom of conscience, yet it was otherwise when it is proposed not only to establish a church but a system for the treatment of disease, and such a corporate purpose is illegal in that it sanctions a system of healing totally at variance with any contemplated by the act of March 24, 1877. (P. L., 42.)

The American Electropathic Institute was refused a charter to give instruction in electricity as a curative agent with power to con-

fer degrees in medicine or electricity, as such qualifications did not meet the standard of the act. A bid was recently vetoed by the Goevrnor because it dispensed the osteopaths from the qualifications prescribed by law, and it conferred upon them power not warranted by law.

There is now pending in the Supreme Court of Missouri a case prosecuted by the St. Louis Medical Society for violation of such a statute as I suggest, in which the court below convicted and fined both the doctor advertising and the publishers; and, however it may eventuate there can be no question that the initiative for proper legislation and the enforcement thereof, rests on the profession as having a special interest in protecting the public from imposition.

The whole design of the laws with relation to the treatment of disease is, of course, to protect the public against quacks or charlatans, ignorant, unscrupulous persons who practice upon the credulity of the afflicted and by assumption of extraordinary knowledge raise their hopes to get their money from them and commonly leave them worse than they found them, and often ruin them by depriving them of whatever chance they had of cure. That design is not and can not be fully accomplished while the newspapers are full of alluring and deceptive advertisements enumerating and promising to cure every disease they dare to mention, which includes nearly the whole category, and if there be anything unmentionable, hinting and suggesting, and not always restrained even by the prohibition and penalties of the law from covertly offering for sale the means to procure abortions.

Nor can it be while the United States mails carry and distribute papers with such advertisements of obscenity of which I have hardly given an idea, and circulars and letters yet more obscene. It is unnecessary to cite or quote specific examples, for there is no day that dawns in which some of them may not be seen in some of the papers.

The August number of the "Hahnemannian Monthly" quotes without comment a defense of quackery, which says: "The Medical Society of Pennsylvania has assembled like a parcel of wise owls and resolved that newspapers should not advertise patent medicines. In their wisdom they did not suggest any substitute for the financial returns which the newspapers would throw away if they rejected such advertising." I am afraid that we must share with the Medi-

cal Society of Pennsylvania the odium of being "wise owls," "old fogeys" and "non-progressive" in the estimation of those "young and brilliant men" who, as the author says, "are constantly coming to the front with new discoveries, new ideas and advanced thoughts," but who are unable to qualify themselves to conform with the standards established by law. The censure and praise of these "brilliant" incapables are alike indifferent to us.

But since quackery could not thrive without such advertisements, the press, religious as well as secular, by taking them, and publishing them, and by sowing them broadcast over the land, makes itself accessory to the crime of the quack against his simple victims, sharing in their plunder to the extent of the price received for the advertisement, and despite of this tainted money the press claims to be a moral influence. In saying this I do not deny that the press has exercised great educational and moral influence, only that in so far as that influence leads the afflicted to the tender mercies of the quack it is not for good, on the contrary it is so bad that a little moral uplift would refuse to do it for so much per square inch. With pleasure, however, I add there are some honorable exceptions. To the challenge "to suggest some substitute for the financial return which the newspapers would throw away if they rejected such advertising," a plea simply for an acknowledged contamination, I would answer that clean hands would be a good substitute, clean papers to be received into a clean household would be a good substitute. But for the wholly sordid and mercenary let them know, make them know, and enlist every one you can to help you make them know, that so long as they defile their columns with deceptive argument and indecent advertisements they will be excluded from decent homes. Let them know that the moral sense of the public will give an uplift to the moral sense of the press with material rewards to those papers which refuse to soil their sheets for the hire of the courtesan. I regret to say that some of those who resort to this kind of advertisement are qualified physicians, some of them of our own school, but deceptive and dishonest methods must be denounced without distinction of the classes by whom they are practiced.

The quack although in business simply for money sometimes poses as a philanthropist. Real philanthropy is an admirable thing, but outside of the public dispensary whenever any individual or in-

stitution advertises that medicines or medical treatment will be given gratuitously, the source from which such advertisement emanates, whether it be "foreign," "sojourner" or "transient," should be looked into, and its true character ascertained, for this is the most specious form that quackery can assume, and its nostrums are dear if taken though without money or price. If the public can not be protected against indecency and dishonesty of quacks because of the difficulty of shaping legislation which would be constitutional as not contravening the guarantees of free speech and free press, then there remains one thing within our power, and that is such education as would be a shield and defense for the innocent. A very large and profitable part of this nefarious practice arises from sexual diseases. For that and other reasons every child should have proper instruction in sexual and general hygiene as well as general anatomy and physiology. A stupid and senseless prudery has hitherto restrained teachers and parents from acquainting them with what their best welfare requires them to know, and leaves them to learn it on the streets, in the back alleys, or when and where and at what cost chance may determine. Such delicacy indulged at the expense of the physical and moral well being of the afflicted and suffering is not only repugnant to reason but is absolutely criminal. Every human being should be taught all things whatsoever that concerns the preservation of the life and health of the individual and society in so far as they depend upon the action or the non-action of the individual as soon as the individual is capable of receiving and profiting by the instruction. If it occur to any that our occupation would suffer or cease, I answer, there is no danger of that, for the instruction of the young must be adapted to their capacity commencing with the simpler and more obvious things. As they grow in years and intelligence their necessities will restrict their learning on these lines and constrain them to their life occupations. Increased popular intelligence will at once permit and oblige our profession to ascend to higher planes of science. Whether we consciously aid or not such is the inevitable tendency, the law of growth and progress.

We want no class legislation, but such only as is essential and necessary for the best interests of the community, the commonwealth, the nation, to promote individual and collective health and well being, to establish standards of qualifications for those whose duty it is to prevent or cure disease and to enforce compliance. On

our part we undertake to comply, but beyond mere compliance it behooves us to be watchful of legislation and to scrutinize every bill directly or indirectly relating to the treatment of disease or to the medical profession; for, not to impugn legislatures, special interests by urgent and plausible representations, may readily deceive and mislead them when not enlightened by opposition and, while a few legislators may be corrupted, there may be enough honorable to turn the scale. It is but proper to acknowledge that part of what I have said is in substance a repetition of what my predecessor has said, but it is my conviction that the truth should be reiterated until it has borne its proper fruit.

The introduction of physiology into the public schools was opposed because it was said that it would not prevent the evil of intemperance but would demoralize youth. Time has demonstrated that knowledge so acquired in a proper and legitimate way is not hurtful but helpful, and time will demonstrate that greater knowledge of the sexual organism and relations imparted to children by proper instruction and proper persons will protect them from many and grievous evils in which their ignorance might otherwise involve them.

The coming physician should be better prepared in our medical colleges to instruct the public on this subject. Some of our medical societies have very fully discussed the matter, and several of our most competent writers and teachers strongly advocate teaching sexual hygiene in public schools.

Since our last meeting a great disaster has fallen upon San Francisco and vicinity, reducing a number of our professional brethren to destitution; the magnitude of the misfortune had hardly been flashed over the land when measures were taken to give helpful expression to the sympathy aroused. The response was both prompt and generous.

While the race continues to exist our profession must be one of the most necessary, responsible and honorable in society. Our mission to prevent, to cure, or to alleviate the suffering from casualties and disease must invariably mould the character of the profession by bringing us into nearer relations and into closer and more intimate sympathy with our fellow men. Our highest ambition should be to qualify yourselves to render them the best and most effective service possible in our day and time, and if it may be to promote a yet

higher degree of efficiency in our successors. Every vocation should be a religion, and surely no vocation more so than that which concerns itself with the sanity of the body, and the resultant sanity of the mind and soul of humanity.

It becomes us to be grateful and to testify our gratitude; therefore, I wish to say in closing, it is good to give honor to whom honor is due, and our profession owes a debt of honor to one who honored it. A few years ago under the auspices of the American Institute of Homœopathy a suitable monument was erected in Washington City to the memory of Samuel Hahnemann; there is another I would wish to see so honored, a disciple and personal friend of his who rendered distinguished service to the cause of Homœopathy, one of the most eminent educators and physicians in our association, a man whom to know was to love and revere. An earnest, tireless worker, a successful teacher and forceful writer. A man endowed with extraordinary intellect, a strong man in every sense, whose wise counsel governed in times of doubt, and whose honors were the logical reward of his genius. Let us show the high estimate we place upon his public services and private life by erecting a suitable statue to the memory of Constantine Hering in the city of Philadelphia, where he did his greatest work and ended his earthly career.

On motion, a vote of thanks was tendered to Dr. Seip for his able address, and a committee, consisting of Drs. J. J. Tuller, W. F. Edmundson and D. P. Maddux, was directed to consider the address and present its report upon it later in the session. It made the following

REPORT OF THE COMMITTEE UPON THE PRESIDENT'S ADDRESS.

The Committee on President's Address begs leave to report that we believe the many excellent suggestions contained in the President's address could be best furthered by their wide dissemination; that the correction of many of the evils to whch he calls attention and which are so flagrant and offensive, could be best effected along proper educational lines, and we would recommend and urge that liberal reprints of this address be ordered and that the Corresponding Secretary be instructed to send a copy to all members of our school in our State and to the secular press of the State.

On motion, the report was accepted, and the suggestions in reference to the reprints ordered carried out.

In the absence of two of the regularly elected members of the Board of Censors, Drs. Wm. A. Haman and W. C. Tripp were appointed to act in conjunction with Dr. H. F. Schantz in examining the credntials of the applicants for membership.

REPORT OF THE CORRESPONDING SECRETARY.

The Corresponding Secretary reported that in the past year the correspondence of the Society had been carried on as usual. By direction of the Board of Trustees our foreign confreres were given a special invitation to attend our meeting on their way to the meeting of the American Institute of Homœopathy and of the International Homœopathic Congress. A number of fraternal responses were received in answer to this invitation.

Dr. J. Nicholas Mitchell, of Philadelphia, sent a communication to the Corresponding Secretary asking that his resignation from membership be presented at the present meeting. On motion the resignation was accepted.

The following program for the meeting was offered to the Society for action thereon:

ORDER OF BUSINESS.

THURSDAY, SEPTEMBER 6, 1906.

Morning Session, 10 to 1 o'Clock.

1. Call to order.
2. Invocation.
3. Address of welcome—J. J. Tuller, M. D., President of the Homœopathic Medical Society of the County of Philadelphia.
4. Response to address of welcome.
5. Address of president—C. P. Seip, M. D.
6. Roll call.
7. Report of Corresponding Secretary.
   Adoption of program.
8. Report of Trustees.
9. Report of committees.

a. Organization, Registration and Statistics—G. B. Moreland, M. D., *Chairman.*

b. Legislation—D. P. Maddux, M. D., *Chairman.*

c. Publication—E. M. Gramm, M. D., *Chairman.*

10. Report of the Necrologist—Chandler Weaver, M. D.

11. The following amendments to the By-Laws were properly presented at the last meeting of the Society.

Amend Article IX, of the By-Laws, by adding after the clause in reference to the Publication Committee the following: "A Committee on Membership and Organization to consist of six members who shall serve for two years, three members to be appointed each year. It shall be the duty of this Committee to aid in obtaining new members for the Society; to urge attendance at the annual meetings, and to promote the organization of county and other local societies, so that fraternal and close professional relationship of the members of the Homœopathic medical profession may be furthered."

Amend Article IX, of the By-Laws, by adding to it "A Committee delegated to serve on the Interstate Committee of the American Institute of Homœopathy to consist of two members of this Society who shall also be members of the American Institute of Homœopathy, to serve for a term of four years; and two alternates who shall also serve four years, and who shall be members of this Society and of the American Institute of Homœopathy."

SECTION OF PATHOLOGY AND PATHOLOGICAL ANATOMY.

V. S. Gaggin, M. D., Chairman.

Associates—Drs. W. H. Lyle, E. H. Pond, C. I. Wendt, F. V. Woodlridge.

V. S. Gaggin, M. D., Pittsburgh, "X-ray Burns."

E. H. Pond, M. D., Pittsburgh, "Acne."

S. W. Sappington, M. D., Philadelphia; C. F. Rau, M. D., Philadelphia, "Adherent Pericardium With Ascites; a Report of Two Cases."

C. I. Wendt, M. D., Pittsburgh, "Clinical Pathology."

F. V. Wooldridge, M. D., Pittsburgh, "The Specific Action on the Kidneys of Kali Chloricum."

Afternoon Session, 3 to 6 o'Clock.

SECTION OF SURGERY.

J. D. Elliott, M. D., Chairman.

Associates—Drs. L. T. Ashcraft, W. D. Carter, E. R. Gregg, W. N. Hammond, W. C. Hunsicker, H. P. Leopold, D. P. Maddux, W. Joline Martin, J. H. McClelland, H. L. Northrop, J. H. Thompson, R. E. Tomlin, G. A. Van Lennep, W. B. Van Lennep.

J. D. Elliott, M. D., Philadelphia, "Injuries About the Wrist Joint."

L. T. Ashcraft, M. D., Philadelphia, "Prostatic Abscess."

W. D. Carter, M. D., Philadelphia (representing the W. B. Van Lennep Clinical Club), "After Treatment of Abdominal Operations."

W. N. Hammond, M. D., Philadelphia, "Tendon Transference for Certain Deformities of the Lower Extremities."

W. C. Hunsicker, M. D., Philadelphia, "Treatment of Venereal Sores and Their Complications.'

H. P. Leopold, M. D., Philadelphia, "Movable Kidney."

D. P. Maddux, M. D., Chester, "The Before and After Care of Section Cases."

W. Joline Martin, M. D., Wilkinsburg, "The X-ray in Surgery."

H. L. Northrop, M. D., Philadelphia, "Pancreatic Cysts."

D. Roman, M. D., Philadelphia, "Biliary Lithiasis."

J. H. Thompson, M. D., Pittsburgh, "Practical Hints in Surgery."

R. E. Tomlin, M. D., Philadelphia, "Abscesses."

G. A. Van Lennep, M. D., Philadelphia, "The Radical Cure of Inguinal Hernia."

C. I. Wendt, M. D., Pittsburgh, "Intussusception of the Intestines."

Evening Session, 8 to 10:30 o'Clock.

SECTION OF SANITARY SCIENCE.

W. H. Holsberg, M. D., Chairman.

Associates—Drs. J. D. Boileau, G. M. Golden.

W. H. Holsberg, M. D., Lebanon, "Internal Secretions."

W. F. Baker, M. D., Philadelphia, "Public Baths and Bath Houses in Their Relation to Some of the Local Contagions."

J. D. Boileau, M. D., Philadelphia, "Sea Bathing."

G. M. Golden, M. D., Philadelphia, "The Early Examination of Pulmonary Tuberculosis."

SECTION OF HOMŒOPATHIC INSTITUTES AND CLINICAL MEDICINE.

A. P. Bowie, M. D., Chairman.

Associates—Drs. W. D. Bayley, Ralph Bernstein, W. A. Haman, I. W. Heysinger, W. J. Martin, A. C. Shute.

A. P. Bowie, M. D., Uniontown, "The Essential Elements of a Homœopathic Prescription."

H. C. Allen, M. D., Chicago, Ill., "A Case of Mercurial Deafness."

W. D. Bayley, M. D., Philadelphia, "Melancholia."

Ralph Bernstein, M. D., Philadelphia, "Some of the More Common Skin Diseases; Their Diagnosis and Treatment."

W. A. Haman, M. D., Reading (representing the Homœopathic Practitioners' Association of Reading), "Sphygmomanometric Determinations and Their Clinical Value."

W. J. Martin, M. D., Pittsburgh, "Modality Prescribing Illustrated."

E. B. Nash, M. D., Cortland, New York, "Clinical Experience."

A. C. Shute, M. D., Pottstown, "Clinical Experience with Kali Carb. 30 in Nervous Dyspepsia."

FRIDAY, SEPTEMBER 7.

Morning Session, 9:30 to 1 o'Clock.

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

G. W. Stewart, Chairman.

Associates Drs. H. K. Toy, W. Spencer, J. W. Stitzel, C. M. Thomas, H. B. Ware, H. S. Weaver .

G. W. Stewart, M. D., Philadelphia, "The Ocular Balance."

H. K. Hoy, M. D., Altoona, "Ophthalmia Neonnatorum."

W. Spencer, M. D., Philadelphia, "Anomalies of Refraction."

J. W. Stitzel, M. D., Hollidaysburg, "Adenoids."

C. M. Thomas, M. D., Philadelphia, "Some Points in the General Treatment of Ear Diseases."

H. B. Ware, M. D., Scranton, "Specialism and Ethics in the Medical Profession."

H. S. Weaver, M. D., Philadelpha, "Mouth Manifestations of Syphilis."

SECTION OF OBSTETRICS.

S. G. A. Brown, M. D., Chairman.

Associates—Drs. M. M. Fleagle, G. W. Hartman, J. E. James, Jr., D. C. Kline, E. W. Mercer.

S. G. A. Brown, M. D., Shippensburg, "Occipito-Posterior Positions."

M. M. Fleagle, M. D., Hanover, "The Therapeutic Value of Homœopathic Remedies to the Obstetrician."

G. W. Hartman, M. D., Harrisburg, "Threatened Abortion."

J. E. James, Jr., M. D., Philadelphia, "The Management of the Third Stage of Labor."

D. C. Kline, M. D., Reading, "The Homœopathic Prescription in Pregnancy."

E. W. Mercer, M. D., Philadelphia, "The Albuminuria of Pregnancy."

Afternoon Session, 3 to 6 o'Clock.

SECTION OF MATERIA MEDICA AND PROVINGS.

C. C. Rinehart, M. D., Chairman.

Associates—Drs. Edward Cranch, S. W. S. Dinsmore, W. F. Edmundson, J. C. Guernsey, O. S. Haines, Aug. Korndœrfer, Sr., Julia C. Loos, C. S. Middleton, Z. T. Miller, W. A. Seibert.

C. C. Rinehart, M. D., Pittsburgh, "A Comparison of Remedies Useful in Headache."

Edward Cranch, M. D., Erie, "Natrum Mur. and Its Philosophy."

S. W. S. Dinsmore, M. D., Sharpsburg, "Calcarea Carb. in Its Relation to Tuberculosis."

J. C. Guernsey, M. D., Philadelphia, "Some Well Known Remedies that Deserve to be Better Known."

Aug. Korndœrfer, Sr., M. D., Philadelphia, "Digitalis and a Few Other Heart Remedies."

Julia C. Loos, M. D., Harrisburg, "Kali Carb. and His Near Relatives."

C. S. Middleton, M. D., Philadelphia, "A Few Comparisons."
Z. T. Miller, M. D., Pittsburgh, "Benzoic Acid.'
W. A. Seibert, M. D., Easton, "A Materia Medica Study."

Friday Evening.

Members and visitors will be entertained at a reception and collation at the Bellevue-Stratford Hotel by the Homœopathic Medical Society of the County of Philadelphia.

SATURDAY, SEPTEMBER 8.

Morning Session, 9:30 to 1 o'Clock.

SECTION OF GYNÆCOLOGY.

N. F. Lane, M. D., Chairman.
Associates—Drs. B. F. Betts, Mary Brewer, T. L. Chase, T. J. Gramm, D. B. James, J. E. James, Sr.
N. F. Lane, M. D., Philadelphia, "A Review of Gynæcology."
T. L. Chase, M. D., Philadelphia, "The Diagnosis of Surgical Lesions in the Lower Abdomen."
T. J. Gramm, M. D., Philadelphia, "Fibroid Uterus; With Specimens."
D. B. James, M. D., Philadelphia, "Gonorrhœa in the Female."

SECTION OF PÆDOLOGY.

F. E. Howell, M. D., Chairman.
Associates—Drs. E. M. Gramm, G. J. Palen, C. S. Raue, E. R. Snader, W. W. Speakman, W. W. Van Baun.
F. E. Howell, M. D., Reading, "The Early Recognition and Treatment of Deformities in Children."
E. M. Gramm, M. D., Philadelphia, "The Care of the Baby's Skin."
G. J. Palen, M. D., Philadelphia, "The Treatment of Ear Diseases in Children."
Charles Platt, M. D., Philadelphia, "The Value of Chemical Analyses in the Diagnosis of Diseases of Children."
E. R. Snader, M. D., Philadelphia, "Pneumonia in Children."

W. W. Speakman, M. D., Philadelphia, "The Treatment of Ear Diseases."

W. W. Van Baun, M. D., Philadelphia, "The Child Labor Question."

Conclusion of reports of Sections and discussions.

Final report of the Board of Censors.

Unfinished business.

New business.

Selection of place for next meeting.

Adjournment.

Dr. G. W. Stewart, Chairman of the Section of Ophthalmology, stated that the eye, ear, nose and throat specialists of Philadelphia feared that they would be unable to attend the meeting of the Society if his Section reported on Friday morning. It was, therefore, upon motion, decided that the Section of Ophthalmology should report on Saturday afternoon at 3 o'clock.

With this exception the program of the meeting was adopted as published.

The Board of Censors reported having examined into the qualifications of the following applicants for membership, and they were thereupon, on motion, elected:

REPORT OF THE BOARD OF CENSORS.

William F. Baker, M. D., 1425 Spruce Street, Philadelphia.

C. Albert Bigler, Jr., M. D., 2001 N. 13th Street, Philadelphia.

Theron L. Blackledge, M. D., 1221 Third Ave., New Brighton.

Alexander O. Blair, M. D., Stevenson Building, Pittsburgh.

R. C. Casselberry, M. D., Chester.

H. G. Dean, M. D., New Castle.

Ralph Deming, M. D., 1833 Chestnut Street, Philadelphia.

E. A. Farrington, M. D., 1626 Walnut Street, Philadelphia.

J. A. Fischer, M. D., 505 Green Street, Philadelphia.

Charles D. Fox, M. D., 2126 Pine Street, Philadelphia.

J. W. Frank, M. D., 114 N. 17th Street, Philadelphia

Michael F. Gallagher, M. D., 1514 N. 18th Street, Philadelphia.

Arthur Hartley, M. D., 2101 Susquehanna Ave., Philadelphia.

Wm. M. Hillegas, M. D., 1001 Belmont Ave., Philadelphia.

J. C. Hornecker, M. D., 3813 Forbes Ave., Pittsburgh.

Thomas C. Imes, M. D., 518 S. 15th Street, Philadelphia.
J. H. Kreider, M. D., Lykens.
M. W. Livingston, M. D., Latrobe.
Frederick S. Morris, M. D., 408 Second Ave., Pittsburgh.
Edward G. Muhly, M. D., 1627 S. Sixth Street, Philadelphia.
Ward I. Pierce, M. D., Diamond Bank Building, Pittsburgh.
James A. Plush, M. D., 319 S. 10th Street, Philadelphia.
Desiderio Roman, M. D., 1429 Poplar Street, Philadelphia.
Clyde W. Sampel, M. D., 742 Penn Ave., Wilkinsburg.
B. E. Sankey, M. D., New Castle.
Malachi W. Sloan, M. D., 4825 Baltimore Ave., Philadelphia.
Charles W. Stegmenn, M. D., 4634 E. Thompson Street, Philadelphia.
Edgar C. Statler, M. D., 461 Linden Street, Allentown.
Deacon Steinmetz, M. D., 1835 N. 17th Street,. Philadelphia.
Lydia W. Stokes, M. D., 1719 Arch Street, Philadelphia.
J. Howard Swick, M. D., Beaver Falls.
Howard W. Taylor, M. D., 316 Collins Ave., Pittsburgh.
Howard Terry, Jr., M. D., 226 Church Street, Phœnixville.
C. L. Thomas, M. D., 2802 Columbia Ave., Philadelphia.
Edward C. Thomas, M. D., 711 N. 43d Street, Philadelphia.
J. G. Thompson, M. D., New Brighton.
Urania Tyrrel, M. D., 154 N. 20th Street, Philadelphia.
A. Grace White, M. D., Bradford.
Lewis D. W. Willard, M. D., 955 Western Ave., Allegheny.

REPORT OF THE BOARD OF TRUSTEES.

Philadelphia, September 6, 1906.

To the Officers and Members of the Homœopathic Medical Society of the State of Pennsylvania:

I beg to submit the following report of the Board of Trustees:

Your Trustees have held one regular and two special meetings. Considerable business for the benefit of the Society came up for consideration on account of our national body meeting at Atlantic City.

As the action taken at Altoona last year in reference to the meeting of this year was contrary to the law governing incorporated bodies, the Board directed the Corresponding Secretary to issue a

circular letter to the members of the Society asking for an expression of their opinions in regard to the meeting on a postal card sent at the same time, hoping thus to arrive at a solution of the question. However, this did not decide the matter, so the Trustees then selected September 6, 7 and 8, 1906, as the dates for the meeting, and Philadelphia as the place.

The next business of importance was the consideration of those members who were in arrears with their annual dues. After thorough discussion, pro and con, it was decided to remit the dues of all members who were in arrears for the dues of 1903 and subsequent years, provided that they make application for reinstatement during the present meeting, and accompany their application with the membership fee of $5.00.

The expenses of the Society during the year were promptly met.

The balance in the Treasurer's hands at the last report was	$1,868.07
Paid out vouchers Nos. 45 to 56, inclusive	1,521.36
Leaving a balance on hand of money collected up to the meeting of 1905	$346.71

Fraternally submitted,

I. B. GILBERT, M. D., *Secretary.*

Under the conditions imposed by the Board of Trustees, as set forth in its report, the following members of the Society made application for reinstatement. On motion, they were reinstated, their reinstatement to be dated 1906 on the record of membership.

LIST OF MEMBERS REINSTATED.

A. W. Baily, M. D.
W. S. Bigelow, M. D.
T. S. Bradford, M. D.
F. D. Brewster, M. D.
C. S. Brown, M. D.
J. C. Calhoun, M. D.
H. C. Chisholm, M. D.
E. P. Clark, M. D.
W. C. Cook, M. D.
J. W. Dehoff, M. D.
T. S. Dunning, M. D.
P. H. Ealer, M. D.
D. P. Gerberich, M. D.
S. Hamilton, Jr., M. D.
W. H. Ho'sberg, M. D.
M. R. Jamison, M. D.
A. L. Kistler, M. D.
B. Knerr, M. D.
W. H. Malin, M. D.
H. K. Mansfield, M. D.
W. F. Marks, M. D.
B. R. Marsden, M. D.

W. Joline Martin, M. D.
E. W. Mercer, M. D.
J. E. Monroe, M. D.
G. J. Palen, M. D.
G. W. Parker, M. D.
E. H. Pond, M. D.
H. E. Ramsey, M. D.
J. H. Reading, M. D.
L. W. Reading, M. D.
J. M. Reeves, M. D.
H. A. Roscoe, M. D.
I. G. Shallcross, M. D.
S. F. Shannon, M. D.
J. R. Swartz, M. D.
J. W. Thatcher, M. D.
D. B. Umstead, M. D.
J. A. Walter, M. D.
F. E. Wasserman, M. D.
M. S. Williamson, M. D.
C. A. Yocom, M. D.

REPORT OF THE TREASURER.

Allegheny, Pa., Sept. 5, 1906.

To the Officers and Members of the Homœopathic Medical Society of the State of Pennsylvania:

I beg to submit the annual report of the Treasurer, as follows:

RECEIPTS.

1905.		
Sept. 19.	To balance	$1,868.07
1906.		
Sept. 5.	To annual dues collected	1,627.00
		$3,495.07

DISBURSEMENTS.

1905.			
Order No.	45.	Sept. 21. Ella D. Goff, traveling expenses	$50.00
"	46.	Sept. 21. Geo. B. Moreland, traveling expenses	50.00
"	47.	Sept. 21. John D. Boileau Legislative com. expense	117.00
"	48.	Sept. 21. E. M. Gramm, for Wm. M. Clift, stenog., reporting meeting	100.00
"	50.	Oct. 5. Institute of Drug Proving of Am. Inst. of Homœop.	250.00
"	51.	Sept. 21. "Examiner," printing programs and expressage	20.00

"	52.	Sept. 21. E. M. Gramm—			
		Postage, etc.	$35.06		
		Mailing, etc., programs..	18.12		
		Mailing, etc., membership com. circulars....	15.76		
		Stenographer, getting out Transactions	50.00		
		Traveling expenses	50.00		
		Printing letter heads and envelopes	6.13		
				175.07	
"	53.	"Examiner," printing, etc., 450 copies "Transactions"		718.14	
"	54.	"Examiner," envelopes, postals and circulars		24.05	
"	55.	Van Fleet & Son, 1,500 envelopes,		5.25	
"	56.	Ella D. Goff, 500 stamped envelopes and printing		11.85	
					1,521.36
		Balance on hand Sept. 5, 1906			$1,973.71

Respectfully submitted,

ELLA D. GOFF, M. D.,
Treasurer.

REPORT OF THE COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS.

September 6, 1906.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Organization, Registration and Statistics presents its annual report for publication. A list of the local societies and of the hospitals and dispensaries under our control is given, and a detailed statement of data obtainable concerning them is placed at your disposal.

We desire, through the medium of this report, to thank all who have answered our requests for information.

Respectfully submitted,

GEO. B. MORELAND, M. D.,
Chairman.

HOMŒOPATHIC MEDICAL SOCIETIES

NAME.	PRESIDENT.
Lehigh Valley Homœopathic Medical Society.	E. D. Doolittle, M. D., Easton.
Homœopathic Society of Northeastern Pennsylvania.	Anna C. Clarke, M. D., Scranton.
Homœopathic Medical Society of Philadelphia County.	W. K. Ingersoll, M. D., Philadelphia.
Homœopathic Medical Society of Allegheny County.	S. M. Rinehart, M. D., Allegheny.
Homœopathic Medical Society of the 23d Ward, Philadelphia.	Franklin Watson, M. D., Willow Grove.
Homœopathic Medical Society of Schuylkill County.	Ellwood K. Steckel, M. D., Orwigsburg.
Alumni of Hahnemann Medical College of Philadelphia.	William Boericke, M. D., San Francisco, Cal.
Homœopathic Medical Society of Beaver County.	S. B. Moon, M. D., Beaver Falls.
Germantown Homœopathic Medical Society of Philadelphia.	T. J. Gramm, M. D., Philadelphia.
Hahnemann Club of Philadelphia.	O. S. Haines, M. D., Philadelphia.
Oxford Medical Club of Philadelphia.	Office vacant in memory of Carl V. Vischer, M. D., Philadelphia.
Woman's Homœopathic Medical Club of Philadelphia.	Margaret C. Lewis, M. D., Philadelphia.
Bœnninghausen Medical Club of Philadelphia.	T. P. Gittens, M. D., Philadelphia.
Homœopathic Practitioners' Association of Reading.	George I. Keen, M. D., Reading.
A. R. Thomas Club of Philadelphia.	H. I. Jessup, M. D., Philadelphia.
The Clinico-Pathologic Society of Philadelphia	Joseph C. Guernsey, M. D., Philadelphia.
Philadelphia Clinical Society.	Chas. M. Thomas, M. D., Philadelphia.
Philadelphia Medical Club.	Clarence Bartlett, M. D., Philadelphia.
East End Doctors' Club.	J. H. McClelland, M. D., Pittsburgh.
Homœopathic Pharmaceutical Association of Pennsylvania.	F. J. Slough, M. D., Allentown.
Homœopathic Medical Society of Delaware County.	Isaac Crowther, M. D., Chester.
Homœopathic Medical Society of Chester County.	S. Leroy Barber, M. D., West Chester.
Homœopathic Medical Society of Luzerne County.	John A. Brooke, M. D., Wilkes-Barre.
Homœopathic Medical Society of Lackawanna County.	H. B. Ware, M. D., Scranton.
Philadelphia Medical and Surgical Society.	Leon T. Ashcraft, M. D., Philadelphia.

OF THE STATE OF PENNSYLVANIA.

Secretary.	Organized.	Meetings.	Number of Members.	Dues.
A. J. Bittner, M. D., Allentown.	1881	Bi-Monthly.	30	$1.00
Theodore Johnson, M. D., Pittston.	1882	Semi-Annually.	26	2.00
J. D. Elliott, M. D., 334 S. 15th St., Phila.	1866	Monthly.	275	1.00
H. S. Nicholson, M. D., Empire Building, Pittsburgh.	1864	"	80	2.00
John D. Boileau, M. D., 804 Lehigh Ave., Phila.	1881	"	29	1.00
E. H. Mauer, M. D., Ashland.	1882	Quarterly.	26	1.00
W. D. Carter, M. D., 1315 S. Broad St., Phila.	1857	Annually.	1657	1.00
Wm. Raymer, M. D., Beaver Falls.	1883	Monthly.	12	1.00
L. W. Thompson, M. D., 1701 Green St., Phila.	1883	"	101	10.00
T. S. Dunning, M. D., 1328 N. 15th St., Phila.	1872	"	10	None.
C. W. Simmons, M. D., 1628 N. 18th St., Phila.	1885	"	16	2.00
Margaret E. Burgess M. D., 1639 Race St., Phila.	1883	"	16	None.
Geo. W. Smith, M. D., Philadelphia.	1877	"	9	None.
Margaret Hassler-Schantz, M.D., 402 N. 5th St., Reading.	1896	"	16	1.00
A. A. Norris, M. D., 4818 Chester Ave., Phila.	1888	"	19	None.
Theo. J. Gramm, M. D., Philadelphia.	1899	"	86	2.00
Joseph C. Guernsey, M. D., 1923 Chestnut St., Phila.	1874	"	7	None.
Edwin H. Van Deusen, M. D., 2101 Tioga St., Phila.	1882	"	10	None.
C. I. Wendt, M. D., 117 S. Highland Ave., Pittsburgh.	1895	"	19	None.
E. P. Anschutz, M. D., Philadelphia.	1881	At Call of President.	13	None.
Geo. C. Webster, M. D., Chester.	1898	Monthly.	21	1.00
L. Hoopes, M. D., West Chester.	1898	"	21	1.00
C. C. Thompson, M. D., South Main St., Wilkes-Barre.	1899	"	17	None.
Geo. M. DeWitt, M. D., Board of Trade, Scranton.	1900	"	19	None.
Geo. H. Bickley, M. D., Philadelphia.	1899	"	20	None.

HOMŒOPATHIC MEDICAL SOCIETIES

Name	President.
Women's Homœopathic Medical Association of Pittsburgh.	Millie J. Chapman, M. D., Pittsburgh.
Organon Medical Club of Chester.	R. P. Mercer, M. D., Chester.
Wm. B. Van Lennep Clinical Club.	J. E. Belleville, M. D., Philadelphia.
Goodno Homœopathic Medical Society.	J. W. De Hoff, M. D., York.
The Homœopathic Medical Society of Delaware, Chester and Montgomery Counties.	Edward S. Haines, M. D., Rutledge.
The Homœopathic Medical Society of Lebanon County.	Wm. F. Bruce, M D., Lebanon.
Raue Medical Club of Central Pennsylvania.	R. L. Piper, M. D., Tyrone.
Homœopathic Medical Society of Erie County.	Philip J. Johnston, M. D., Erie.
Pathological Society of Pittsburg.	Wm. A. Stewart, M. D., Pittsburgh.
Philadelphia Society for Clinical Research	Malachi Sloan, M. D., Philadelphia.

OF THE STATE OF PENNSYLVANIA.

Secretary.	Organized.	Meetings.	Number of Members.	Dues.
Anna D. Varner, M. D., 616 Wood St., Wilkinsburg.	1899	Monthly.	9	None.
D. P. Maddux, M. D., Chester.	1887	"	15	None.
Arthur Hartley, M. D., Philadelphia.	1896	"	20	$2.00
E. T. Prizer, M. D., Lancaster.	1899	"	36	1.00
Isaac Crowther, M. D., 800 Madison Ave., Chester.	1858	"	73	1.00
F. E. Bamberger, M. D., 202 Seventh St., Lebanon.	1904	Bi-Monthly.	16	1.00
A. L. Baker, M. D., 1400 12th Ave., Altoona.	1896	Monthly.	15	1.00
Lucy H. Black, M. D., 130 W. Eighth St., Erie.	1891	"	22	3 00
H. A. Roscoe, M. D., Diamond Bank Building, Pittsburg.	1905	"	12	2.00
Wm. McKenzie, M. D., 313 N. 63d St., Philadelphia.	1905	"	11	6.00

HOMŒOPATHIC DISPENSARIES

Name.	Secretary.	Location.
General Dispensary of the Pittsburgh Homœopathic Hospital.	D. G. Stewart, 1019 Liberty Ave.	Pittsburgh.
Eye and Ear Dispensary of the Pittsburgh Homœopathic Hospital.	D. G. Stewart.	Pittsburgh.
Hahnemann Medical College Hospital Dispensary of Philadelphia.	Wm. G. Foulke, Franklin Building.	Philadelphia.
Children's Homœopathic Hospital Dispensary.	Walter Strong, M. D., 2105 N. 13th St.	Philadelphia.
Hahnemann Hospital Dispensary.	Miss E. K. Richmond Scranton.	Scranton.
Homœopathic Dispensary of Reading.	W. W. Light, M. D., 35 N. 6th St.	Reading.
Dispensary Women's Homœopathic Association of Pennsylvania.	Mrs. F. B. Skinner, Provident Building.	Philadelphia.
*St. Luke's Homœopathic Hospital.	Miss M. E. Lewars, M. D., Wakefield and Logan Sts.	Philadelphia.

*Report for year incomplete owing to removal.

HOMŒOPATHIC HOSPITALS

Name.	Location.	Secretary or Executive Officer.	Incorporated.	Opened to Patients.
Medical, Surgical and Maternity Hospitals of the Women's Homœopathic Association of Pennsylvania.	Philadelphia.	Mrs. F. B. Skinner. Provident Bldg.	1882	1882
Children's Homœopathic Hospital.	Philadelphia.	Walter Strong, M. D., 2105 N 13th St	1877	1877
Homœopathic Medical and Surgical Hospital.	Pittsburgh.	D. G Stewart, 1019 Liberty St	1866	1866
Hahnemann Medical College Hospital.	Philadelphia.	Chas. Mohr, M. D., Philadelphia	1848	1848
Hahnemann Hospital.	Scranton.	C. H. Wills, M D., Connell Building.	1897	1897
Homœopathic Medical and Surgical Hospital.	Reading.	W. W. Light, Reading.	1890	1891
Woman's Southern Homœopathic Hospital of Philadelphia.	Philadelphia.	Miss A. M. Miller, 1911 Mt. Vernon St.	1896	1896
St. Luke's Homœopathic Hospital.	Philadelphia.	Wm. H. Keim, 1716 N. 18th St.	1896	1896
*Beaver Valley General Hospital.	New Brighton.	Miss A. E. McCowan, New Brighton.	1894	1895
J. Lewis Crozer Home for Incurables and Homœopathic Hospital.	Chester.	S. K. Ubil, Chester.	1897	1900

*Staff composed of homœopathic and allopathic physicians.

OF THE STATE OF PENNSYLVANIA.

Incorporated.	Opened.	No. of New Patients Last Year.	Treated Last Year.	Prescriptions Last Year.	Out Visits.
1866	1866	3,580	13,461	9,995	None.
1866	1866		4,913		None.
1848	1848	27,670	28,089	130,672	623
1877	1877	9,266	9,266	31,534	610
1897	1897	213	213	558	49
1890	1888	1,326	1,326	4,764	None.
1882	1884		4,437	15 779	133
1896	1896	2,428	9 876	6,294	None.

OF THE STATE OF PENNSYLVANIA.

No. of Beds.	Treated Last Year.	Cured.	Relieved.	Not Relieved.	Died.	Estimated Value of Property and Grounds	Source of Income.
80	1,151	935	39	8	46	$250,000.00	State aid. Donations.
130	1,034	604	120	10	199	210,000.00	State aid. Donations.
140	3,609					800,000.00	State aid. Donations.
140	1,771	1,574	76	21	100	1,250,000.00	State aid. Donations.
48	349	246	62	13	16	115,000.00	State aid. Donations.
75	227	142	66	1	18	75,000.00	State aid. Donations.
38	296	210	51	14	21	22,200.00	State aid. Donations.
37	598	396	114	36	52	125,000.00	State aid. Donations.
50	237	191	19	4	23	50,000.00	State aid. Donations.
75	400						Endowed.

REPORT OF THE COMMITTEE ON LEGISLATION.

The Legislative Committee of the Homœopathic Medical Society of the State of Pennsylvania would respectfully report that inasmuch as the State Legislature has not been in session since our last annual meeting, no active work has been accomplished by your Committee.

The Committee has been organized with the thought of getting some active workingmen in each of the larger communities, and it is their purpose actively to further such legislative matters as may be referred to them by the Society, or as may be outlined in the plans of the coming meeting of the American Institute.

There will doubtless be introduced another bill or bills regulating the practice of medicine in this State, and the attitude of your Committee, as previously expressed, will be in favor of a uniformly high standard of preliminary requirements, and most thorough, broad and liberal, general medical education, conserving the right to an examination on materia medica and therapeutics by a board in consonance with the teachings of the college from which an applicant graduated.

The recent pure food laws passed by our national Congress, and, in a measure, attempted by the last session of our State Legislature, will be supplemented by further laws at the coming session, and it is most sincerely hoped that measures may be enacted which will restrain or abolish the dangerous nostrums which flood our State.

It is difficult or impossible for your Committee to estimate what its expenses may be for the coming year, and we would urge the Society to make suitable provisions for possible contingencies.

In conclusion, your Committee would be pleased to receive instructions from the Society or suggestions from any of its members which would aid them in advancing our common professional interests.

Respectfully submitted,

D. P. Maddux, M. D.,
Chairman.

The Publication Committee, Dr. E. M. Gramm, Chairman, reported that the Transactions of the meetings held in 1905, consisting of 495 pages, had been placed in the hands of the members during the first few days of December, 1905. The Transactions of the

present meeting will be issued at as early a date as possible, this depending much on the time the members turn their papers over to the Committee.

Chandler Weaver, M. D., presented the

REPORT OF THE NECROLOGIST.

JOSEPH HANCOCK, M. D.

Dr. Joseph Hancock was born March 9, 1851, at Hornerstown, New Jersey, and died January 19, 1906. He was the son of William Hancock, a farmer. His early education was obtained from the village schools of his native town, where he afterward taught for three years; he also took an advanced course at Peddie Institute, Hightstown, New Jersey, as well as a business course in the Trenton Business College, where he taught for a period of three years. He then entered Hahnemann College of Philadelphia, from which he graduated in 1878. He became partner and assistant to Dr. Malarius B. Fegely. The latter dying in 1879, Dr. Hancock started for himself. He removed to his late residence, 1639 Columbia avenue, in 1882. He was a member of the American Institute of Homœopathy, the Homœopathic Medical Society of the State of Pennsylvania, the Philadelphia County Society and the Bœnninghausen Club. A widow and two sons survive him. The oldest, Judson, graduated from Hahnemann College since his father's death.

WILLIAM G. STEELE, M. D.

Dr. William G. Steele was born April 15, 1865, in Philadelphia, Pa., and died on April 30, 1906. He was a graduate of the Park Avenue Grammar School. He graduated from the Hahnemann Medical College of Philadelphia in 1886; he also had a degree of Doctor of Electro-Therapeutics. Dr. Steele was a member of the Homœopathic Medical Society of the State of Pennsylvania, Philadelphia County Society, Germantown and Oxford Medical Clubs.

CARL V. VISCHER, M. D.

Dr. Carl V. Vischer was born in 1867, and died May 13, 1906. He was the son of C. A. Vischer, a homœopathic pharmacist. He

received his early education at the public schools of Philadelphia, finishing his preparation for college at the New Church Academy, Bethayres, Pa. He graduated from the Hahnemann Medical College of Philadelphia in 1887. He was resident physician of the Children's Homœopathic Hospital in Philadelphia. He then went to Europe for post-graduate courses in the universities at Heidelberg and Vienna, specializing in surgery and pathology. In 1890 he returned to this country, became a member of the teaching staff at Hahnemann Medical College, from which he resigned after four years' service. He was chief surgeon at St. Luke's Hospital, of which he was one of the founders; he was also consulting surgeon at the McKinley Memorial Hospital at Trenton, New Jersey, and the Wilmington Homœopathic Hospital at Wilmington, Del. He was a member of the Homœopathic Medical Society of the State of Pennsylvania, the Pennsylvania Historical Society, the Academy of Natural Sciences, the Philadelphia Athletic Club, the Union League and the Automobile Club. A widow and two sons survive him.

LEWIS HENRY WILLARD, M. D.

Dr. Lewis H. Willard was born in West Philadelphia, September 25, 1839, and died July 30, 1906. His early life was spent on a farm near Hatboro, Pa. At the beginning of the Civil War he was a student in the Medical School of the University of Pennsylvania, but before graduating, he left and enlisted as assistant surgeon in the navy, serving until the close of the war. He then attended the Hahnemann Medical College of Philadelphia, and graduated in 1866. In 1867 Doctor Willard went to Pittsburgh and there entered the Hahnemann Hospital as a resident. The hospital having opened in that year, Dr. Willard was the first resident, and at the time of his death was actively connected with this institution. He was a member of its Executive Committee, the oldest member of its Surgical Staff, Dean of the Training School for Nurses and consulting physician to the dispensary. Dr. Willard was president of the State Board of Medical Examiners, a member of the Commission to erect a homœopathic hospital for the insane at Allentown. He was an active member of the American Institute of Homœopathy, a member of the Allegheny County Medical Society, a member of the Grand Army, the Loyal Legion and the Three Years' Veterans.

Throughout his life Doctor Willard was characterized by promptness of action, fidelity of purpose, loyalty to friends, and above all, sincerity. A widow, two daughters and one son, Lewis D. Willard, M. D., survive him.

The two amendments to Article IX of the By-Laws, which were proposed at the last annual meeting and printed in the program sent to each member, were adopted by the required majority. They both are additions to the Article, and follow the clause in reference to the Publication Committee. They are as follows:

"A Committee on Membership and Organization to consist of six members who shall serve for two years, three members to be appointed each year. It shall be the duty of this Committee to aid in obtaining new members for the Society; to urge attendance at the annual meetings, and to promote the organization of county and other local societies, so that fraternal and close professional relationship of the members of the Homœopathic medical profession may be furthered."

"A Committee delegated to serve on the Interstate Committee of the American Institute of Homœopathy to consist of two members of this Society who shall also be members of the American Institute of Homœopathy, to serve for a term of four years; and two alternates who shall also serve four years, and who shall be members of this Society and of the American Institute of Homœopathy."

Drs. C. S. Middleton and W. H. Keim were appointed tellers to conduct the election for officers, which resulted in the selection of the following:

President, J. J. Tuller, M. D., Philadelphia.

First Vice-President, Anna Johnston, M. D., Pittsburgh.

Second Vice-President, J. D. Boileau, M. D., Philadelphia.

Recording Secretary, G. M. Moreland, M. D., Pittsburgh.

Corresponding Secretary, E. M. Gramm, M. D., Philadelphia.

Treasurer, Ella D. Goff, Allegheny.

Necrologist, Chandler Weaver, M. D., Philadelphia.

Censor, C. E. Myers, M. D., Philadelphia.

Trustees, J. J. Tuller, M. D., Philadelphia; D. C. Kline, M. D., Reading; G. A. Mueller, M. D., Pittsburgh.

On motion, a vote of thanks was tendered the President, C. P. Seip, M. D., for the able and courteous manner in which he had presided over the meeting.

On motion, a vote of thanks was extended to the college authorities for the use of the college building for the meeting.

A vote of thanks was given the press for the excellent reports of the meeting published in the various newspapers.

A vote of thanks was given the physicians of Philadelphia for the hospitable manner in which they had entertained the Society.

A vote of thanks was given the Recording Secretary, the Treasurer and the Corresponding Secretary for the work performed by them during the year.

On motion, the matter of a distinguishing mark for the Seniors, which was referred to the Board of Trustees last year, was deferred until the next annual meeting.

An invitation to meet in Pittsburgh next year was presented on behalf of the Allegheny County Homœopathic Medical Society, and was accepted by unanimous vote.

On motion, the president was empowered to appoint a committee consisting of fifteen members of the Society to collect funds and arrange for the erection of a monument at Philadelphia to Constantine Hering.

On motion, the Committee on Legislation was given authority to draw on the Treasurer for an amount not to exceed $300.00 to defray any expenses which it may incur in the prosecution of its duties.

Dr. G. B. Moreland, offered the following amendment to the By-Laws:

I move to amend Article IV, Section 3, by adding, after the word "annually," the words "no member of the Board of Trustees shall be eligible to serve two terms in succession," so that the Section shall read: "Section 3. The Board of Trustees shall serve for a term of three years, three members to be elected annually. No member of the Board of Trustees shall be eligible to serve two terms in succession."

DELEGATES AND COMMITTEES.

Delegate to the American Institute of Homœopathy, Dr. W. A. Seibert; alternate, Dr. O. S. Haines.

Delegates to the Interstate Committee of the American Institute of Homœopathy, Drs. B. F. Betts and Z. T. Miller.

Committee on Legislation (to serve 1906 and 1907), D. P. Maddux, M. D., Chairman; Associates, Drs. J. D. Boileau, H. M. Bunting, T. H. Carmichael, Anna C. Clarke, Isaac Crowther, W. G. Dietz, E. M. Gramm, E. R. Gregg, T. M. Johnson, W. H. Keim, D. C. Kline, Aug. Korndœrfer, Sr., J. H. McClelland, R. P. Mercer, C. S. Middleton, S. B. Moon, G. B. Moreland, G. A. Mueller, E. C. Parsons, R. L. Piper, E. T. Prizer, F. J. Slough, W. B. Van Lennep, H. B. Ware, Julia G. Wayland.

Committee on Organization, Registration and Statistics, G. B. Moreland, M. D., Chairman; associates, Drs. C. F. Bingaman, E. M. Gramm.

Committee on Publication, E. M. Gramm, M. D., Chairman; associates, Drs. Ella D. Goff, G. B. Moreland.

Press Committee, H. F. Schantz, M. D., Chairman; associates, Drs. L. H. Willard, R. L. Piper.

Membership Committee, E. M. Gramm, M. D., Chairman; associates, Drs. H. F. Schantz, J. D. Boileau, D. C. Kline, W. A. Seibert.

Committee on Hering Monument, C. P. Seip, M. D., Chairman; Associates, Drs. B. F. Betts, A. P. Bowie, E. Cranch, O. S. Haines, John E. James, Sr., D. C. Kline, Aug. Korndœrfer, Sr., D. P. Maddux, W. J. Martin, J. B. McClelland, Wm. A. Seibert, H. B. Ware.

CHARTER OF THE HOMŒOPATHIC MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

To the Honorable, the Judges of the Court of Common Pleas of Philadelphia County, Pennsylvania:

In compliance with the requirements of an Act of the General Assembly of the Commonwealth of Pennsylvania, entitled "An Act to provide for the Incorporation and Regulation of Certain Corporations," approved the twenty-ninth day of April, A. D. 1874, and the supplements thereto, the undersigned, all of whom are citizens of Pennsylvania, having associated themselves together, with others hereinafter named, for the purpose hereinafter specified, and desiring that they may be incorporated according to law, do hereby certify:

First, The name of the proposed Corporation is The Homœopathic Medical Society of the State of Pennsylvania.

Second, The said Corporation is formed for the purpose of organizing the Homœopathic Medical Profession in the State of Pennsylvania and advancing Medical Sciences.

Third, The business of said Corporation is to be transacted in the City of Philadelphia.

Fourth, The said Corporation is to exist perpetually.

Fifth, The names and residences of the Corporators are as follows: William W. Van Baun, M. D., Philadelphia; John F. Cooper, M. D., Allegheny; Edward M. Gramm, M. D., Philadelphia; Z. T. Miller, M. D., Pittsburg; William B. Van Lennep, M. D., Philadelphia; Edward Cranch, M. D., Erie; Augustus Korndœrfer, Sr., M. D., Philadelphia; Alonzo P. Bowie, M. D., Uniontown; Clarence Bartlett, M. D., Philadelphia; Hugh Pitcairn, M. D., Harrisburg; Pemberton Dudley, M. D., Philadelphia; L. H. Willard, M. D., Allegheny; William C. Goodno, M. D., Philadelphia; Daniel P. Maddux, M. D., Chester; J. N. Mitchell, M. D., Philadelphia; Horace B. Ware, M. D., Scranton; William H. Keim, M. D., Philadelphia; W. A. Seibert, M. D., Easton; Charles M. Thomas, M. D., Philadelphia; J. H. McClelland, Pittsburgh; John E. James, Phila-

delphia; Joseph E. Jones, M. D., West Chester; Isaac G. Smedley, M. D., Philadelphia; H. C. Chisolm, M. D., Huntingdon; T. H. Carmichael, M. D., Philadelphia, all of the State of Pennsylvania.

Sixth. The number of Trustees of said Corporation is fixed at nine, and the names and residences of those who are chosen as Trustees until the next annual election are as follows: William W. Van Baun, M. D., Philadelphia; John F. Cooper, M. D., Allegheny; E. M. Gramm, M. D., Philadelphia; Z. T. Miller, M. D., Pittsburg; William B. Van Lennep, M. D., Philadelphia; Edward Cranch, M. D., Erie; William H. Keim, M. D., Philadelphia; J. N. Mitchell, M. D., Philadelphia; Daniel P. Maddux, M. D., Chester.

Seventh. At the next annual election for Trustees of the Corporation three Trustees shall be elected to serve for the term of one year, three others to serve for the term of two years, and three others to serve for the term of three years, and thereafter annually three Trustees shall be elected to serve for the term of three years in the place of those whose terms expire.

Witness our hands and seals this third day of November, A. D. eighteen hundred and ninety-six.

WILLIAM W. VAN BAUN, M. D. [L. S.],
WILLIAM B. VAN LENNEP, M. D. [L. S.],
CLARENCE BARTLETT, M. D. [L. S.],
W. C. GOODNO, M. D. [L. S.],
J. NICHOLAS MITCHELL, M. D. [L. S.].

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF PHILADELPHIA, *ss.*

Before me, the subscriber, a Notary Public for the Commonwealth of Pennsylvania, residing in the City of Philadelphia, personally appeared Wm. W. Van Baun, M. D., Wm. B. Van Lennep, M. D., and Clarence Bartlett, M. D., three of the subscribers of the above and foregoing certificate of incorporation of The Homœopathic Medical Society of the State of Pennsylvania, and in due form of law acknowledged the same to be their act and deed.

Witness my hand and official seal the third day of November, A. D. 1896.

[L. S.] WINFIELD S. SHEARD,
Notary Public.

IN THE COURT OF COMMON PLEAS FOR PHILADELPHIA COUNTY:

In the Matter of the Incorporation of The Homœopathic Medical Society of the State of Pennsylvania.

And now, to wit, this seventh day of December, A. D. 1896, the within Certificate of Incorporation having been on file in the Office of the Prothonotary of said Court since the twelfth day of November, A. D. 1896, on which publication of notice of intended application was first made, as appears from the entry thereon, and due proof of said publication having been presented to me, I do hereby certify that I have perused and examined said instrument and find the same to be in proper form and within the purposes named in the first class of Corporations specified in Section 2 of the Act of April 29, 1874, and that said purposes are lawful and not injurious to the community. It is, therefore, on motion of William C. Hannis, Esq., ordered and decreed that the said Charter be approved and is hereby approved, and upon the recording of said Charter and its endorsements and this decree in the office of the Recorder of Deeds in and for said County, which is now hereby directed, the subscribers and their associates shall thenceforth be a Corporation for the purposes and upon the terms and under the name therein stated.

[L. S.] T. K. FINLETTER,
Judge.

Recorded in the Office for Recording Deeds, etc., in and for the City and County of Philadelphia in Charter Book No. 22, page 284, etc.

Witness my hand and Seal of Office this seventh day of December, A. D. 1896.

[L. S.] WM. GEARY,
Recorder of Deeds.

By-Laws.

ARTICLE I.—Title.

This Corporation shall be known by the name and title of The Homœopathic Medical Society of the State of Pennsylvania.

ARTICLE II.—Object.

The said Society is formed for the purpose of organizing the homœopathic medical profession in the State of Pennsylvania and advancing medical sciences.

ARTICLE III.—Membership.

Section 1. This Society shall be composed of active, honorary and corresponding members.

Sec. 2. A candidate for active membership shall present to the Board of Censors an application, signed by himself, certifying that he has received the degree of Doctor of Medicine from an incorporated medical college, that he subscribes to the doctrine of *Similia Similibus Curentur*, and that he sustains a good moral character—these statements to be vouched for by two members of the Society in good standing. If found qualified, he may be elected a member. He shall not, however, be considered a member until he has paid the first year's dues and signed the Constitution, either in person or by proxy. An active member removing from the State, wishing to retain his membership, shall notify the Corresponding Secretary to that effect, otherwise the Corresponding Secretary shall drop his name from the roll. Any active member who shall be three years in arrears for dues shall forfeit his membership, and he shall not be reinstated until all arrearages shall have been paid. Membership shall also be forfeited by vote of the Society if a member fails to attend the meetings of the Society or present a paper once in five years. Any active member who shall be unable to comply with the requirements of this Society may be continued as an active member, without the payment of dues, by vote of the Society.

SEC. 3. Any Homœopathic physician, not a resident of Pennsylvania, who may be judged worthy, may, by a two-thirds vote of the members present, be elected an honorary member at any annual meeting; provided, that the proposal for honorary membership shall have been made at a previous annual meeting, and said proposal been approved by the Board of Censors, but no more than two shall be elected in one year. Honorary members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues.

SEC. 4. Any Homœopathic physician residing outside of the United States may be elected a corresponding member by a vote of two-thirds of the members present at any annual meeting, but not more than two shall be elected in one year. Corresponding members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues.

ARTICLE IV.—OFFICERS.

SECTION 1. The officers of this Society shall be a President, a First Vice-President, a Second Vice-President, a Recording Secretary, a Corresponding Secretary, a Treasurer, a Necrologist, a Board of Trustees consisting of nine members, and a Board of Censors consisting of three members.

SEC. 2. The nomination for officers of the Society shall be the special order of business for 11 o'clock on the morning of the second day of the annual meeting. The officers shall be elected by ballot, the election to be the special order of business for 11 o'clock on the morning of the third day of the annual meeting. The candidate receiving a majority of the votes cast shall be declared elected. The officers elected shall enter upon their respective duties on the first day of January next succeeding their election, to serve for the term of one year, or until their successors are elected, except as hereinafter provided.

SEC. 3. The Board of Trustees shall serve for a term of three years, three members to be elected annually.

SEC. 4. The Censors shall be elected to serve for three years, one member to be elected annually.

ARTICLE V.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the So-

ciety. He shall preserve order, appoint all committees unless otherwise directed, and discharge all other duties usually pertaining to a presiding officer, in accordance with the provisions of the Charter and these By-Laws. He shall be, *ex officio,* a member of all standing committees of the Society, and Chairman of the Board of Trustees. He shall not be eligible to office two terms in succession. On assuming office it shall be his duty to appoint a Chairman of each of the Sections designated in Article VIII., Section 1, and the Chairman, in conjunction with the President, shall select his associates.

Sec. 2. The Vice-Presidents, in the order of their election, shall perform the duties of the President in his absence.

Sec. 3. The Recording Secretary shall keep correct minutes of the proceedings of the Society, and, when approved, transcribe them in a book kept for that purpose. He shall have charge of the minute-book, all papers, documents, etc., belonging to the Society, other than those pertaining to the Treasurer, the Trustees, or the Committee on Publication, and shall keep them during the intervals of the meetings of the Society. Within twenty-one days after adjournment he shall furnish the Committee on Publication with a correct copy of the minutes for publication in the Transactions, countersign orders upon the Treasurer in accordance with the By-Laws, and shall perform such other duties pertaining to his office as may from time to time be required. He shall be, *ex officio,* Chairman of the Committee on Organization, Registration and Statistics.

Sec. 4. The Corresponding Secretary shall preserve all letters received by the Society, conduct such correspondence as shall tend to advance its interests, prepare the order of business for the annual session of the Society, give at least two weeks' notice of all meetings, keep a record of all members, with the date of admission of each, present all communications to the Society, notify all committees of their appointment and of the business referred to them, and notify all members of their election. He shall be, *ex officio,* Chairman of the Committee on Publication.

Sec. 5. The Treasurer shall hold the evidence of all property belonging to The Homœopathic Medical Society of the State of Pennsylvania, receive all moneys intended for the Treasury of the Society, and deposit the same in the name of The Homœopathic Medical Society of the State of Pennsylvania as shall be directed by the Board of Trustees, make no payments except on orders drawn in ac-

cordance with the By-Laws, keep a full account of receipts and expenditures, which shall at all times be open to the inspection of the Board of Trustees, make a report to the Society in writing at each annual meeting, and, whenever required, of the state of his accounts and the condition of the Treasury, and shall annually notify all members of their arrearages.

Sec. 6. The Necrologist, upon the death of a member of the Society shall prepare a suitable obituary and present it to the Society at its annual meeting.

Sec. 7. The Trustees shall have general supervision of the business of the Society, hold at least one meeting every year, and make a report at the annual session of the Society. The Trustees shall have the power to disburse all money belonging to the Society. No money shall be paid from the treasury except upon a written order, drawn on the Treasurer and countersigned by the Chairman and Secretary of the Board of Trustees.

The Trustees, acting as the Judicial Council, shall take cognizance of, and decide upon all questions of an ethical or judicial character. All questions of a personal character shall be referred at once, without discussion, to the Judicial Council. Every decision of the Council shall be in writing, signed by a majority of the members present, be reported to this Society at the earliest practical moment, and shall be final. The Council shall preserve permanent records of all its proceedings.

Sec. 8. The Censors shall examine the credentials of candidates for membership, and report to the Society for election those who may be found qualified. They may report in the regular order of business or at the close of the report of any bureau.

ARTICLE VI.—Meetings.

Section 1. The annual meeting shall be held in the month of September, on the days and at the place decided upon at the annual meeting next preceding; an invitation to hold the annual meeting in any locality shall be considered only when extended by a regularly organized society.

Sec. 2. Nine members shall constitute a quorum for the transaction of the ordinary business of the Society; but for scientific or literary purposes, unless an actual count be called for, a quorum

shall always be presumed. For amending the By-Laws, twenty members shall constitute a quorum.

SEC. 3. The Board of Trustees shall have power to direct such other meetings as it may judge advisable.

SEC. 4. Should occasion arise making it necessary to change the time and place of meeting agreed upon at the previous annual session, the same may be done by a vote of the Board of Trustees.

ARTICLE VII.—DUES.

SECTION 1. Active members shall pay the sum of five dollars upon their election.

SEC. 2. Active members shall pay annually, in advance, the sum of three dollars toward defraying the expenses of the Society. Any member who shall fail to pay his annual dues for three successive years shall be dropped from the roll of members, after having been notified by the Corresponding Secretary of the forfeiture of his membership. The published proceedings of the Society will be furnished only to those members who are not in arrears for dues.

ARTICLE VIII.—SECTIONS.

SECTION 1. The following Sections shall be appointed as hereinafter provided:

Materia Medica and Provings.
Homœopathic Institutes and Clinical Medicine.
Surgery.
Obstetrics.
Gynæcology.
Pathology and Pathological Anatomy.
Ophthalmology, Otology and Laryngology.
Pædology.
Sanitary Science.

SEC. 2. Each Section shall be composed of not less than five members, and no member shall be placed on more than one Section.

SEC. 3. The Sections shall report in order of rotation each succeeding year, except the Section of Materia Medica, whose report shall be a special order of business at the opening of the afternoon session of the second day of the Society meeting.

SEC. 4. If a member of a Section shall resign or decline to serve,

the Chairman of the Section shall fill the vacancy and notify the Corresponding Secretary of his action.

ARTICLE IX.—Standing Committees.

The following Committees shall be appointed by the President on assuming office:

A Committee on Legislation which shall serve two years, of at least nine members, to be appointed by the President in alternate years, whose duty it shall be to give special attention to all legislation involving the interests of the Society.

A Committee on Organization, Registration and Statistics, of at least three members, to be appointed by the President, of which the Recording Secretary shall be Chairman. It shall receive all credentials of delegates to the Society; receive and preserve reports from local and State societies, colleges and other institutions; keep a record of the number of members admitted and withdrawn from the Society, and perform such other duties as may be directed by the Society. From these data the annual report of the Committee shall be prepared.

A Publication Committee, consisting of the Treasurer, Recording Secretary and Corresponding Secretary, the latter being Chairman; but the numbebr of its members may be increased at the discretion of the Society. It shall be the duty of the Committee within six months from the date of the annual meeting to publish and issue the Transactions to all who are entitled to receive them, unless otherwise directed by the Society.

A Committee on Membership and Organization to consist of six members who shall serve for two years, three members to be appointed each year. It shall be the duty of this Committee to aid in obtaining new members for the Society; to urge attendance at the annual meetings, and to promote the organization of county and other local societies, so that fraternal and close professional relationship of the members of the Homœopathic medical profession may be furthered.

A Committee delegated to serve on the Interstate Committee of the American Institute of Homœopathy to consist of two members of this Society who shall also be members of the American Institute of Homœopathy, to serve for a term of four years; and two

alternates who shall also serve four years, and who shall be members of this Society and of the American Institute of Homœopathy.

ARTICLE X.—Papers and Discussions.

Section 1. Each paper presented to this Society shall be through its appropriate Section. All papers to be presented by any Section shall be in the hands of the Chairman thereof at the opening of the session. All papers shall be subject to the approval and revision of the Publication Committee. No paper will be received by the Society in an incomplete condition, and no paper will be published as part of the Transactions which has been published previous to its presentation to this Society. No paper shall occupy more than fifteen minutes in the reading, unless the time be extended by an affirmative three-fourths' vote of the members of the Society present. In the absence of the author of a paper the Chairman of its appropriate Section may request any member of the Society present to read the same or it shall be read at the request of five members. Any paper may be published in a medical journal subsequent to its presentation to the Society, provided that the original be retained in the custody of the Publication Committee.

All communications read before the Society shall become its property.

Sec. 2. The discussion shall follow the reading of each paper, unless otherwise ordered by the Society. All discussions shall be confined to the subject of the paper or report. No member shall speak more than twice on the same subject, except by vote of the Society, and each speaker shall be limited to a speech of ten minutes, and to one of five minutes if he speaks a second time. No excess of time shall be allowed, except by consent of the Society. The reader of the paper shall be allowed ten minutes at the close of the discussion.

ARTICLE XI.—Seal.

The Society shall have and use one common seal. The Corresponding Secretary shall be the custodian of the seal.

ARTICLE XII.—Senior Members.

Members of the Society who shall have maintained twenty-one

years of consecutive membership shall be Senior Members, and their names shall be printed in capital letters in the list of members in the Transactons.

ARTICLE XIII.—Code of Ethics.

Section 1. The Code of Ethics of the American Institute of Homœopathy is adopted by this Society for its guidance.

Sec. 2. All complaints of violation of the Code of Ethics shall be referred to the Judicial Council, and the decision of the Council shall be final.

ARTICLE XIV.—Minutes.

The reading of the minutes for approval and record shall be the first order of business at the morning meetings of the Society, and at the close of the final session.

ARTICLE XV.—Amendments.

These By-Laws may be altered or amended by a vote of two-thirds of the members present at any annual meeting; *provided*, that notice of such proposed alteration or amendment shall have been given to the Society in writing at the annual meeting next preceding, and notice of such proposed alteration or amendment shall appear in the call for the meeting at which it is to be acted upon.

CODE OF MEDICAL ETHICS

OF THE

AMERICAN INSTITUTE OF HOMŒOPATHY

(ADOPTED IN 1893.)

SCOPE.

The scope of a Code of Medical Ethics comprises the reciprocal duties and obligations of physicians and patients; the duties and obligations of physicians to each other; and the reciprocal duties and obligations of physicians and the public.

FUNDAMENTAL PRINCIPLES.

The great principles upon which Medical Ethics are based are these:

1. The great end and object of the physician's efforts should be: "The greatest good to the patient."

2. The rule of conduct of physician and patient, and of physicians toward each other, should be the GOLDEN RULE: "As ye would that men should do to you, do ye also to them, likewise."

The various articles of the Code are only special applications of these great principles.

PART I.

RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND PATIENTS.

Article I. DUTIES OF PHYSICIANS TO PATIENTS.
" II. DUTIES OF PATIENTS TO THEIR PHYSICIANS.

PART II.

DUTIES AND OBLIGATIONS OF PHYSICIANS TO EACH OTHER.

Article I. DUTIES AS MEMBERS OF THE MEDICAL PROFESSION.
" II. PROFESSIONAL SERVICES TO EACH OTHER.

" III. Vicarious Services.
" IV. In Regard to Consultation.
" V. In Cases of Interference.
" VI. Differences Between Physicians.
" VII. Concerning Pecuniary Obligation.

PART III.

RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THE PUBLIC.

Article I. Duties of the Profession to the Public.
" II. Obligations of the Public to Physicians.

PART I.

OF THE RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THEIR PATIENTS.

Article I.—Duties of the Physician to the Patient.

Section 1. The physician should hold himself in constant readiness to obey the calls of the sick. He should bear in mind the sacred character of his calling and the great responsibility which it involves, and shou'd remember that the comfort, the health and the lives of his patients depend upon the skill, attention and faithfulness with which he performs his professional duties.

Section 2. The physician, in order that he may be able to exercise his vocation to the best advantage of the patient, should possess his respect and confidence. These must be acquired and retained by faithful attention to his malady, by indulgent tenderness toward the weaknesses incident to his condition, and by the exercise of a firm but kindly authority. The physician is bound to keep secret whatever he may either hear or observe while in the discharge of his professional duties, respecting the private affairs of the patient or his family. And this obligation is not limited to the period during which the physician is in attendance on the patient. The patient should be

made to feel that he has, in his physician, a friend who will guard his secrets with scrupulous honor and fidelity.

SECTION 3. The physician should visit his patient as often as may be necessary to enable him to acquire and keep a full knowledge of the nature, progress, changes and complications of the disease, and to do for the patient the utmost of good that he is able. But he should carefully avoid making unnecessary visits lest he render the patient needlessly anxious about his case, or expose himself to the charge of being actuated by mercenary motives.

SECTION 4. The physician should not give expression to gloomy forebodings respecting the patient's diseases, nor magnify the gravity of the case. Bearing in mind the almost infinite resources of nature, he should be cheerful and hopeful, both in mind and manner. This will enable him the better to exercise his faculties and apply his knowledge for the patient's benefit, and will inspire the patient with confidence, courage and fortitude, which are the physician's best moral adjuvants.

But it is the physician's duty to state the true nature and prospects of the case, from time to time, to some judicious friend or relative of the patient, and to keep this person fully informed of its changes and probable issue; and if the patient himself request the physician to disclose to him the nature and prognosis of his disease, it is his duty to state tenderly, but frankly, the whole truth—provided the patient be of sound mind and strong enough to receive the disclosure without serious injury. The patient has a right to know the truth. If, moreover, facts within the physician's knowledge lead him to believe that it is of great importance in relation to the patient's affairs, that he should be warned of the approach of death, it is the physician's duty to reveal to the patient's nearest friend, or to the patient himself, the true state of the case, and the importance of timely action.

SECTION 5. Whether the case proceed favorably, or become manifestly incurable, it is the physician's duty to continue his attendance faithfully and conscientiously so long as the patient may desire it. He is not justified in abandoning a case merely because he supposes it incurable.

SECTION 6. As the patient has an undoubted right to dismiss his physician for reasons satisfactory to himself, so likewise, the physician may, with equal propriety, decline to attend patients, when his self-respect or dignity seem to him to require this step; as, for ex-

ample, when they persistently refuse to comply with his directions.

SECTION 7. In difficult or protracted cases consultations are advisable. They tend to increase the knowledge, energy and confidence of the physician, and to maintain the courage of the patient. The physician should be ready to act upon any desire which the patient may express for a consultation, even though he may not himself feel the need of it. Nothing is so likely to maintain the patient's confidence as alacrity in this respect. Moreover, such a course is but just to him, for he has an indisputable right to whatever aid or counsel he may think likely to be of service to him.

SECTION 8. The intimate relations into which the physician is brought with his patient give him opportunity to exercise a powerful moral influence over him. This should always be exerted to turn him from dangerous or vicious courses towards a temperate and virtuous life. The physician is sometimes called to assist in practices of questionable propriety, and even of a criminal character. Among these may be mentioned the pretence of disease, in order to evade services demanded by law, as jury or military duty; the concealment of organic disease or of morbid tendencies, in order to secure favorable rates of life insurance, or for deception of other kinds; and especially the procurement of abortion when not necessary to save the life of the mother. To all such propositions, the physician should present an inflexible opposition. It is his duty, in an authoritative, but friendly manner, to explain and urge the nature, illegality and guilt of the proposed action, and to use every effort to dissuade from it, and to strengthen the patient's virtue and sense of right. The physician should be aware of the frequency of criminal abortion, and of the different methods employed for it, and should take every occasion to warn those who may be tempted to resort to it. In no case should the physician induce abortion, or premature labor, without a previous consultation, with the most experienced practitioners obtainable, nor without the most clear and imperative reasons.

Article II.—Duties and Obligations of Patients to Their Physicians.

SECTION 1. Physicians are required, by the nature of their profession, to sacrifice comfort, ease and even health, for the sake of their patients. Patients should reflect upon this, and should understand and remember that they have corresponding duties and obligations towards their physicians.

SECTION 2. The patient should select a physician in whose knowledge, skill and fidelity he can place implicit confidence; whose habits of life are regular and temperate, and whose character and demeanor are such that he can regard him as a personal friend. He must be able to confide in him freely. And the physician should not be changed for light reasons. A physician thoroughly acquainted with the constitution, temperament and tendencies of a fami'y can the more successfully treat them.

SECTION 3. The patient shou'd always consult his phpsician as early as possib.e after he has discovered that he is i'l. A disease which is trifling at its onset may grow formidable through neglect. The physician should be regarded as a confidential adviser, who, on being early consulted, may prevent a sickness.

SECTION 4. The patient should faithfu'ly and unreservedly state to his physician the supposed cause of his malady, and tell him everything that may have a bearing upon its nature. Since the physician is under the strongest obligations to secrecy, the patient should not allow considerations of delicacy, modesty or pride to prevent an entirely frank statement of his case, and candid and full replies to interrogatories.

SECTION 5. The patient should implicitly obey his physician's injunctions as regards diet, regimen and medica' treatment. If he deviate from these directions, he cannot hold the physician to a full responsibility in the case; and, further, by a partia' obedience he incurs some personal risk, since, in the treatment of diseases, all parts of the physician's advice are made to harmonize, and each is dependent on the others and may be unsafe without the coincidence of the others. Moreover, he does the physician an undeserved, and often a serious, wrong. If the patient have not sufficient confidence in his physician, and respect for him, to fo'low his directions, it were better for him to frankly say so, and to employ another in whom he can confiide.

The patient should never allow himself, whi'e under a physician's treatment, to take other medicines than those prescribed by him. He would, by so doing, incur a serious risk of taking medicines that are incompatible with eath other. If desirous of trying any other mode of treatment it would be much better frank'y to state the fact to his physician and ask his advice.

SECTION 6. The patient should, if possible, avoid receiving the

friendly visit of a physician other than the one under whose charge he is. When he receives such visits he should avoid conversation on the subject of his disease, for an accidental observation might give him false impressions respecting his disease or destroy his confidence in the treatment he is pursuing. He should never send for a consulting physician without the express consent of his own medical attendant, for physicians can act together for the advantage of their patient only when they act harmoniously. Nor should he, by a secret appointment, constrain his medical attendant to meet another physician with whom he might not be willing to consult; but the patient has an undoubted right to have the opinion of any physician whom he may desire upon his case. His proper course is to request his medical attendant to arrange a consultation and frankly state his desire for the physician whom he may prefer. If his medical attendant decline the consultation it is then for the patient to determine whether he will insist and thus dismiss his medical attendant, or whether he will defer to the judgment of his own physician. And the patient has a right thus to choose.

SECTION 7. If the patient wishes to dismiss his physician he should, in justice and in common courtesy, state his reasons, and, if possible in a friendly manner. To dispense with the service of a physician need not, of necessity, change the social relations of the parties.

SECTION 8. The patient should, when practicable, send for the physician in the morning, before his usual hour for leaving home. He will, by so doing, secure his earlier attendance, and will enable him the better to apportion his time so as to do justice to all his calls and engagements. He should call on his physician during his office hours only, and should avoid disturbing him in hours devoted to meals, rest and sleep. And in receiving his physician's visits he should avoid compelling him to wait, even a few minutes. The aggregate of petty detenitons, while the patient is making some needless preparation to receive the physician, amount to a serious waste of valuable time.

PART II.

OF THE DUTIES AND OBLIGATIONS OF PHYSICIANS TO THE PROFESSION AND TO EACH OTHER.

Article I.—Duties to the Profession.

SECTION 1. Inasmuch as every member of the medical profession partakes of the honor in which it is held, and is entitled to its privileges and immunities and profits by the scientific labors of his predecessors and associates, it is his duty faithfully to endeavor, in his turn, to elevate the position of the profession and, by every honorable exertion, to enrich the science of medicine.

SECTION 2. In no other profession should a higher standard of morality and greater purity of personal character be required. Physicians ought to come up to this standard and do what they may to exalt it. As the practice of medicine requires constant exercise of a vigorous and clear understanding, and as the practitioner should be, at all times, ready for emergencies in which the welfare and even the life of a fellow-creature may depend upon his steady hand, acute eye, and unclouded brain, it is incumbent upon the physician to be temperate in all things.

SECTION 3. The physician should not resort to public advertisements or private cards or handbills, inviting the attention of persons affected by particular diseases or publicly offering advice and medicine to the poor *gratis*, or promising radical cures. Neither should he publish cases of operations in the daily prints, nor invite laymen to be present at operations, nor solicit or exhibit certificates of skill and success, nor perform any similar act.

SECTION 4. It is equally derogatory to professional character for a physician to hold a patent for any nostrum or any surgical instrument or appliance, or to keep secret the nature or composition of any medicine used by him. Such restriction or concealment is inconsistent with the beneficence and liberality which should characterize the medical profession. But it is the duty of the physician to avail himself of every opportunity to observe the action and study the properties of new or secret remedies and new processes of preparing medicines as well as new modes of treating diseases, and to sub-

ject them to the analysis of scientific investigation. For the physician should always bear in mind that the great object of his profession is to cure the sick, and that it is not only admissible, but it is his solemn duty to investigate thoroughly and without prejudice whatever offers any probability of adding to his knowledge of the art and means of curing and of thus enriching the science of medicine.

Article II.—Professional Services of Physicians to Each Other.

SECTION 1. All practitioners of medicine, their wives and children, while under the paternal care, are entitled to the gratuitous services or any one or more of the faculty residing near them. Physicians, when ill, are incompetent to prescribe for themselves. The natural anxiety and solicitude which they feel for members of their own family when ill tend to obscure their professional judgment and make it difficult to treat them. Under these circumstances physicians are peculiarly dependent on each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. But visits should not be obtruded officiously or unasked upon a sick physician.

If, however, a physician in affluent circumstances, request the attendance of a distant professional brother and offer an *honorarium*, it is not proper to decline it, for one should not, even from a kindly motive, impose upon another a pecuniary obligation which the recipient would not wish to incur.

If a physician is called from any considerable distance the expense of travel, etc., thereby incurred should always be paid by the physician receiving the visit, and an *honorarium* may be tendered if time is consumed in making the visit.

Article III.—Duties of Physicians as Regards Vicarious Offices.

SECTION 1. Attention to his personal affairs, the pursuit of health and the various contingencies to which the physician is peculiarly exposed, sometimes compel him temporarily to withdraw from his duties to his patients and to request some of his professional brethren to discharge them for him. Compliance with such a request is an act of courtesy which should always be performed with the ut-

most consideration for the interests and character of the physician relieved. And when this is done for a short period only all the pecuniary obligations for such services should belong to him. But if a physician neglect his business in quest of amusement and pleasure he is not entitled to the frequent and long-continued exercise of this fraternal courtesy without conceding to the physician who acts for him the fees accruing from the duties discharged by the latter.

SECTION 2. Obsterical and surgical cases involve unusual fatigue and responsibility, and it is just that the fees accruing therefrom should belong to the physician who attends them.

Article IV.—Duties of Physicians in Regard to Consultations.

SECTION 1. A complete medical education, of which the diploma of a medical college is the formal voucher, furnishes the only presumptive evidence of the professional acquirements and abilities. But the annals of the profession contain the names of some who, not having the advantage of a complete medical education, became, nevertheless, through their own exertions and abilities, brilliant scholars and successful practitioners. A practitioner, therefore, whatever his credentials may be, who enjoys a good moral and professional standing in the community, should not be excluded from fellowship, nor his aid rejected, when it is desired by the patient in consultation. No difference in views on subjects of medical principles or practice should be allowed to influence a physician against consenting to a consultation with a fellow practitioner. The very object of a consultation is to bring together those who may, perhaps, differ in their views of the disease and its appropriate treatment, in the hope that, from a comparison of different views, may be derievd a just estimate of the disease and a sucessful course of treatment.

No tests of orthodoxy in medical practice should be applied to limit the freedom of consultations. Medicine is a progressive science. Its history shows that what is heresy in one century may and probably will be orthodoxy in the next. No greater misfortune can befall the medical profession than the action of an influential association or academy establishing a creed or standard of orthodoxy or "regularity." It will be fatal to freedom and progress in opinion and practice. On the other hand, nothing will so stimulate the healthy growth of the profession, both in scientific strength and in

the honorable estimation of the public, as the universal and sincere adoption of a platform which shall recognize and guarantee:

1. A truly fraternal good will and fellowship among all who devote themselves to the care of the sick.

2. A thorough and complete knowledge, however obtained, of all the direct and collateral branches of medicical science—as it exists in all sects and schools of medicine—as the essential qualification of a physician.

3. Perfect freedom of opinion and practice, as the unquestionable prerogative of the practitioner, who is the sole judge of what is the best mode of treatment in each case of sickness intrusted to his care.

The physician may, with propriety, decline to meet a practitioner of whose inimical feelings toward himself or of whose general unfairness in consultations he is satisfied. But in such a case he should explain to the patient his reasons; and if the patient desire the opinion of the practitioner objected to the family physician may withdraw from the case and allow the other to be sent for. But in justice to the latter the state of affairs should be explained to him at the time he is requested to visit the patient.

Section 2. The utmost punctuality should be observed in the visits of physicians when they are to hold consultations together; and this is generally practicable, for society allows the plea of professional engagements to excuse the neglect of all others, and to be a valid reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period of time, after which the consultation should be considered postponed to a new appointment. If it be the attending physician who is present he will, of course, see the patient and prescribe; but if it be the consulting physician he should retire without seeing the patient, except in case of emergency, or when he has been called from a considerable distance, in which case he may examine the patient and give his opinion in writing and under seal, to be delivered to the attending physician.

Section 3. In consultations no rivalry or jealousy should be indulged in. Candor, probity and all due respect should be exercised toward the physician in charge of the case. If the consulting physician cannot agree with him respecting the nature and proper treatment of the case the physician should state this fact to the patient or

his nearest friend, both physicians being present at the time, and should request him to select the one in whom he has most confidence. But if they agree sufficiently to take joint charge of the case, then the consulting physician must justify and uphold, so far as he can conscientiously do so, the practice of his associate, and must abstain from any hints, insinuations or actions which might in any way impair the confidence which the patient reposes in him, or affect his reputation. He must refrain from any extraordinary attentions or assiduities calculated to ingratiate himself in the patient's favor and to supplant his associate.

SECTION 4. In consultations the attending physician should first put the necessary questions to the patient. After this the consulting physician should make such additional inquiries and examinations as may be needed to satisfy him of the true nature of the case. But he should avoid making a parade of examining the patient more thoroughly than had been done before, rather suggesting to the attending physician wherever is possible, to make whatever examinations he desires, than making them himself. Both physicians should then retire to a private room for deliberation.

SECTION 5. In consultations the attending physician should deliver his opinion first; and, when there are several consulting physicians, they should express their opinions in the order in which they have been called in. Should an irreconcilable diversity of opinion occur, when more than two physicians meet in consultation, the opinion of the majority should be regarded as decisive; but, if the number be equal on each side, the decision should rest with the attending physician. If two physicians, in consultation, cannot agree they should call in a third to act as umpire. If this be not practicable the patient must be requested to select the physician in whom he is most willing to confide. The physician who is left in the minority should, without any ill-feeling, retire from the consultation and from any further participation in the management of the case; and, in justice to the physician thus retiring, the fact of his difference from his associates should, in the presence of all the physicians attending, be explained to the patient as his reason for withdrawing from the case.

SECTION 6. The attending physician should communicate to the patient or his friends the directions agreed upon in the consultation, as well as any opinion which it may be thought proper to express.

But no statement or discussion should take place before the patient or his friends, except in the presence of all physicians attending, and by their common consent. And no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence. No decision arrived at in a consultation is to be regarded as restraining the attending physician from making such variations in the treatment as any subsequent change in the case may demand. But such variation, and the reason for it, ought to be carefully noted at the time, and detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician, if he is sent for in an emergency when the attending physician is out of the way; and similar explanations must be made by him at the next meeting.

SECTION 7. Sometimes a special consultation is desirable in cases in which the continued attendance of two physicians might be objectionable to the patient. The consulting physician, in such a case, should sedulously avoid all further unsolicited attendance. Such consultations require an extraordinary outlay of time and attention, and at least a *double honorarium* may be reasonably expected.

SECTION 8. The consulting physician cannot, with propriety, take exclusive charge at any time of the patient in whose case he has been called in consultation without the consent of the attending physician, except in cases provided for by the third sentence of section 3 and by the fourth sentence of section 5, of this article.

Article V.—Duties of Physicians in Cases of Interference.

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should base their expectations of success upon the extent of their qualifications, not upon intrigue or artifice. A physician should not allow himself to feel envious or jealous of a brother practitioner. The distinction which one successful physician wins is shared by the whole profession. Nor should a physician suffer himself to feel ill-will towards another who may come into his neighborhood and appears likely to take a share of the business which he has hitherto enjoyed. Such feelings are inconsistent with the beneficent and liberal nature of the profession. Liberality and true generous fraternity in thought, word and deed will unite the interests of all the members of the profession, and will so exalt the estimation in which it is held in the community that, confidence being increased, business will likewise increase; and to physicians

will be acorded the position which, of right, should be theirs, that of confidential family advisers in all matters pertaining to the care of the body in health no less than in sickness.

SECTION 2. The physician, in his intercourse with a patient who is under the care of another practitioner, should observe the strictest caution and reserve. No meddling questions should be asked in any interview for business or friendship, no disingenuous hints thrown out relating to the nature and treatment of his disorder; nor should the patient be allowed to converse upon these topics. No course of conduct should be pursued which might, directly or indirectly, tend to diminish the trust reposed in the physician employed.

SECTION 3. A physician should not take charge of a patient who is, or has recently been, under the charge of another practitioner in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or has been regularly notified that his services are no longer required. Under such circumstances no unjust or illiberal remarks should be made or insinuations thrown out in relation to the treatment pursued by the previous physician. Nor should the physician permit the patient unreasonably to find fault with his predecessor, for patients often become dissatisfied with their attention on account of the mere duration of a case which no degree of professional knowledge or skill could have shortened.

SECTION 4. In cases of accident or sudden emergency one or more physicians are often sent for by alarmed friends. Courtesy should assign the patient to the first of these that arrives; and he should select from those present such additional assistance as he may deem necessary. But he should also request the family physician (if there be one) to be sent for, and on his arrival, resign the case into his hands. The practitioner of the patient, when he arrives should take the place of any one called in his absence. "The practitioner of any patient" is the man whom he has in any way given to understand that he regards him as his medical adviser, or who would now be in charge of the case were it not for his absence, sickness or other disability.

SECTION 5. In a sparse population, a physician, when visiting a sick person, may be desired to see, in an emergency, a neighboring patient, who is under the regular charge of another physician. The conduct to be pursued on such an occasion is to give advice adapted

to present circumstances; to interfere as little as possible with the general plan of treatment; to assume no farther direction of the case unless it be expressly desired; and, in the latter case to request an immediate consultation with the practitioner previously employed.

SECTION 6. A wealthy physician should not give advice *gratis* to the affluent, because his so doing is an injury to his professional brethren. The office of the physician can never be suported as an exclusively beneficent one, and it is defrauding, in some degree, the common fund when fees are dispensed with which might justly be claimed.

SECTION 7. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished in the absence of the former, the latter is entitled to the fee, but he should resign the patient to the practitioner first engaged.

Article VI.—Of Differences Between Physicians.

SECTION 1. Diversity of opinion and opposition of interests may, in the medical, as in other professions, sometimes occasion controversy and even contention. When such cases occur and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court medical.*

Article VII.—Of Pecuniary Acknowledgments.

SECTION 1. Some general rules should be adopted by the physicians in every town or district relative to pecuniary acknowledgments from patients. These should be adhered to by physicians as uniformly as circumstances will permit. They serve, likewise, as a standard to which appeal may be taken in cases of doubt or dispute.

SECTION 2. Members of the medical profession have been so uniformly in the habit of attending, gratuitously, the indigent sick, and, in general, of answering every call promptly and without a question as to whether they are to receive remuneration therefor, that many persons seem to think they have a right to demand the service of physicians, and do, in fact, call upon them freely, and neglect or refuse to render any pecuniary equivalent, although abundantly able to do so. They impose upon one physician in this way until they

have exhausted his patience, and then call upon another; and thus, in the course of a few years, make the circuit of the profession in their neighborhood. It is proper for the physicians of a community to make a list of the names of such individuals, and to demand, before visiting those whose names are on it, adequate security that their *honorarium* will be paid.

PART III.

THE RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THE PUBLIC.

Article I.—Duties of Physicians to the Public.

SECTION 1. As good citizens, it is the duty of physicians to be vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens. They should be always ready to give counsel to the public in relation to matters appertaining to their *profession,* as, for example, on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, the location, arrangements and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases. And, when pestilence prevails it is their duty to face the danger and to continue their labors for the alleviation of suffering and the saving of life, even at the risk of their own lives.

SECTION 2. Physicians should always be ready, when called on by the proper authorities, to enlighten coroners' inquests and courts of justice on matters strictly medical, such as involve questions relating to insanity, legitimacy, or sudden and violent deaths, and in regard to the various other subjects embraced in the science of medical jurisprudence. But, in these cases, and especially where they are required to make post-mortem examinations, it is just and right, in consequence of the time, labor and skill required and the responsibility and risk they incur, that the public should award them more than a mere consulting fee.

SECTION 3. There is no profession, by the members of which

eleemosynary services are more freely dispensed than they are by physicians; but justice demands that some limits should be placed to the claims upon such offices at their hands. Poverty, professional brotherhood, the benevolent and scantily remunerated occupation of the individual patient, and certain of the public duties referred to in Section 1 of this Article, should always be recognized as presenting valid claims for gratuitous services. But neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, or perform military duty, or to certify to the state of health of parties wishing to insure their lives, obtain pensions or the like, without a pecuniary acknowledgment. But to indigent persons such professional services should always be cheerfully and freely accorded.

Article II.—Obligations of the Public to Physicians.

SECTION 1. The benefit accruing to the public, directly and indirectly, from the active and constant labors and beneficence of the medical profession are so numerous and important that physicians are justly entitled to the utmost consideration from the community. The public ought, likewise, to entertain a just appreciation of the proper qualifications of a practitioner of medicine; to make a due discrimination between true science and the assumptions of ignorance and empiricism; to afford every encouragement and facility for the acquisition of medical education, and not to allow the provisions of their statute books or of the prospectus of their chartered institutions to interpose any obstacles to the attainment of the fullest knowledge of every branch of medical science, or in any way, to restrain the most entire freedom of thought, investigation and action in matters appertaining to the practice of medicine.

OFFICERS OF THE SOCIETY FROM ITS ORGANIZATION TO THE PRESENT TIME.

PRESIDENTS.

1866. J. B. GOOD, M. D.
1867. W. WILLIAMSON, M. D.
1868. C. PRESTON, M. D.
1869. W. WILLIAMSON, M. D.
1870. O. B. GAUSE, M. D.
1871. M. COTE, M. D.
1872. J. H. MARSDEN, M. D.
1873. B. W. JAMES, M. D. (February.)
1873. J. F. COOPER, M. D. (October.)
1874. C. A. STEVENS, M. D.
1875. R. J. McCLATCHEY, M. D.
1876. J. E. JONES, M. D.
1877. J. C. BURGHER, M. D.
1878. H. N. GUERNSEY, M. D.
1879. L. H. WILLARD, M. D.
1880. J. K. LEE, M. D.
1881. J. H. McCLELLAND, M. D.
1882. J. C. MORGAN, M. D.
1883. P. DUDLEY, M. D.
1884. W. R. CHILDS, M D.
1885. J. E. JAMES, M. D.
1886. D. COWLEY, M. D.
1887. A. R. THOMAS, M D.
1888. HUGH PITCAIRN, M. D.
1889. W. B. TRITES, M. D.
1890. C. F. BINGAMAN, M. D.
1891. AUGUSTUS KORNDŒRFER, SR., M. D.
1892. E. C. PARSONS, M. D.
1893. J. C. GUERNSEY, M. D.
1894. C. S. MIDDLETON, M. D.
1895. W. J. MARTIN, M. D.
1896. W. W. VAN BAUN, M. D.
1897. Z. T MILLER, M D.
1898. W. H. KEIM, M. D.
1899. B. F. BETTS, M. D.
1900. C. C. RINEHART, M. D.
1901. H. B WARE, M D.
1902. R. P. MERCER, M. D
1903. O. S. HAINES, M. D.
1904. D. C. KLINE, M D.
1905. W. A. SEIBERT, M. D.
1906. C. P. SEIP, M. D.

FIRST VICE-PRESIDENTS.

1866. J. H. P. FROST, M. D.
1867. J. H. MARSDEN, M. D.
1868. H. HOFMAN, M. D.
1870. C. A. STEVENS, M. D.
1871. R. FAULKNER, M. D.
1872. H. N. GUERNSEY, M. D.
1873. M. PRESTON, M. D. (February.)
1873. M. FRIESE, M. D. (October.)
1874. I. LEFEVRE, M. D.
1875. J. E. JONES, M. D.
1876. J. C. BURGHER, M D.
1877. L. H. WILLARD, M. D.
1878. W. R. CHILDS, M. D.
1879. M. M. WALKER, M. D.
1880. H. DETWILLER, M. D.
1881. B. F. BETTS, M. D.
1882. P. DUDLEY, M. D.
1883. HUGH PITCAIRN, M. D.
1884. C. MOHR, M. D.
1885. D. COWLEY, M. D.
1886. W. H. BIGLER, M. D.
1887. W. J. MARTIN, M. D.
1888. W. B. TRITES, M. D.

1889. C. F. BINGAMAN, M. D.
1890. C. S. MIDDLETON, M. D.
1891. E. C PARSONS, M. D.
1892. F. R. SCHMUCKER, M. D.
1893. SARAH J. COE, M. D.
1894. Z. T. MILLER, M. D.
1895. M. M. WALKER, M. D.
1896. R. W. McCLELLAND, M. D.
1897. W. H. KEIM, M. D.
1898. H. B. WARE, M. D.
1899. A. P. BOWIE, M. D.
1900. E. H. HILL, M. D.
1901. H. L. NORTHROP, M. D.
1902. W. F. EDMUNDSON, M. D.
1903. W. A. SEIBERT, M. D.
1904. THEO. SURETH, M. D.
1905. C. P. SEIP, M. D.
1906. T. J. GRAMM, M. D.

SECOND VICE-PRESIDENTS.

1866. J. C. BURGHER, M. D.
1867. W. J. BLAKELY, M. D.
1868. J. J. DETWILLER, M. D.
1870. J. H. McCLELLAND, M. D.
1871. H. M. LOGEE, M. D.
1872. S. F. CHARLTON, M. D.
1873. J. C. BURGHER, M. D. (February.)
1873. H. R. FETTERHOFF, M. D. (October.)
1874. W. F. SPETH, M. D.
1875. H. N. MARTIN, M. D.
1876. J. E JAMES, M. D.
1877. J. E. JAMES, M. D.
1878. A. KORNDŒRFER, SR., M. D.
1879. L. M. ROSSEAU, M. D.
1880. J. W. ALLEN, M. D.
1881. J. J. DETWILLER, M. D.
1882. J. B. WOOD, M. D.
1883. C. F. BINGAMAN, M. D.
1884. H. DETWILLER, M. D.
1885. J. K. LEE, M. D.
1886. J. R. READING, M. D.
1887. EDWARD CRANCH, M. D.
1888. C. F. BINGAMAN, M. D.
1889. JOHN MALIN, M. D.
1890. C. H. LEE, M. D.
1891. M. J. CHAPMAN, M. D
1892 SARAH J. COE, M. D.
1893. J. L. FERSON, M .D.
1894. ELIZA L. McCLURE, M. D.
1895. A. P. BOWIE, M. D.
1896. E. R. SNADER, M D.
1897. H. B. WARE, M. D.
1898. EDWARD CRANCH, M. D.
1899. ANNA C. CLARKE, M. D.
1900. R. P. MERCER, M. D.
1901. W. J. MARTIN, M. D.
1902. W. A. SEIBERT, M. D.
1903. THEO. SURETH, M. D.
1904. E. R. GREGG, M. D.
1905. W .G. DIETZ, M D.
1906. ANNA D. VARNER, M. D.

RECORDING SECRETARIES.

1866-1872. B. W. JAMES, M. D.
1873-1878. M. M. WALKER, M. D.
1879-1882. Z. T. MILLER, M. D.
1883. T. M. STRONG, M. D.
1884, 1885. C. BARTLETT, M. D.
1886, 1887. H. F. IVINS, M. D.
1888, 1889. J. H. CLOSSON, M. D.
1890-1894. J. R. HORNER, M. D.
1895. E. M. GRAMM, M. D.
1896-1906. G. B. MORELAND, M. D.

CORRESPONDING SECRETARIES.

1866-1872. R. J. McCLATCHEY, M. D.
1873-1875. P. DUDLEY, M. D.
1876-1879. J. C. GUERNSEY, M. D.
1880-1885. R. E. CARUTHERS, M. D.
1886-1888. C. BARTLETT, M. D.
1889-1894. E. R. SNADER, M. D.
1895. J. R. HORNER, M. D.
1896-1906. E. M. GRAMM, M .D.

TREASURERS.

1866. D. COWLEY, M. D.
1867. H. H. HOFMAN, M. D.
1868. W. WILLIAMSON, M. D.
1870. W. J. BLAKELY, M D.
1871-1873. (February) O. B. GAUSE, M. D.
1873. (October) and 1874. R. J. McCLATCHEY, M. D.
1875-1899. J. F. COOPER, M. D.
1900-1906. ELLA D. GOFF, M. D.

NECROLOGISTS.

1872-1883. W. R. CHILDS, M. D.
1884. M. M. WALKER, M. D.
1885-1889. W. R. CHILDS, M. D.
1890-1894. W. J. MARTIN, M. D.
1895-1896. T. S. DUNNING, M. D.
1897-1901. T. L. BRADFORD, M. D.
1902. J. W. HASSLER, M. D.
1903-1906. C. WEAVER, M. D.

LIST OF MEMBERS.

1899—Adams, T. Louis, M. D., 1831 Chestnut Street, Philadelphia.
1905—Allen, John V., M. D., 4637 Frankford Ave., Philadelphia.
1899—Arthur, Alexander B., M. D., 2039 Spring Garden Street, Philadelphia.
1899—Artz, Jerome L., M. D., 30th and Westfield Streets, Camden, N. J.
1898—Ashcraft, Leon T., M. D., 1833 Chestnut Street, Philadelphia.
1892—Baier, George F., M. D., Norwood.
1906—Baily, A. W., M. D., Atlantic City, N .J.
1901—Baker, A. L., M. D., Altoona.
1896—Baker, Albra W., M. D., 427 Park Ave., Williamsport.
1906—Baker, William F., M. D., 1425 Spruce Street, Philadelphia.
1905—Bamberger, F. E., M. D., Lebanon.
1905—Barclay, H. B., M. D., Greensburg.
1905—Barker, Walter C., M. D., 2043 Girard Ave., Philadelphia.
1898—Barnes, Alonzo M., M. D., 3517 N. Broad Street, Philadelphia.
1881—BARTLETT, CLARENCE, M. D., 1437 Spruce Street, Philadelphia.
1905—Bartine, C. W., M. D., 253 W. Hansberry Street, Philadelphia.
1889—Bayley, Weston D., M. D., 124 S. 16th Street, Philadelphia.
1902—Belville, J. E., M. D., 5915 Green Street, Gtn., Philadelphia.
1904—Bernstein, Ralph, M. D., 37 S. 19th Street, Philadelphia.
1875—BETTS, B. F., M. D., 1609 Girard Ave., Philadelphia.
1904—Betts, Norman S., M. D., 1503 Locust Street, Philadelphia.
1904—Bibighaus, J. R., M. D., Glenside.
1905—Biddle, J. T., M. D., 515 W. Main Street, Monongahela.
1886—Bier, P. A., M. D., 4200 Butler Street, Pittsburg.
1900—Bierman, H., M. D., Bloomsburg.
1906—Bigelow, W. S., M. D., Phillipsburg.
1906—Bigler, C. Albert, Jr., M. D., 2001 N. 13th Street, Philadelphia.
1873—BINGAMAN, C. F., M. D., 412 Smith Block, Pittsburg.

1905—Blackburn, E. C., M. D., 1421 11th Ave., Altoona.
1906—Blackledge, Theron L., M. D., 1221 Third Ave., New Brighton.
1906—Blair, Alexander O., M. D., Stevenson Building, Pittsburg.
1892—Blair, W. W., M. D., 400 Penn Ave., Pittsburg.
1904—Blake, Eva N., M. D., 190 Maplewood Ave., Philadelphia.
1898—Boericke, Felix A., M. D., 1011 Arch Street, Philadelphia.
1905—Bohn, Daniel, M. D., 1021 Seventh Ave., Altoona.
1892—Boileau, John D., M. D., 804 W. Lehigh Ave., Philadelphia.
1905—Bolsinger, P. L., M. D., 533 Locust Street, Johnstown.
1904—Boone, G. H., M. D., Pottsville.
1872—BOWIE, A. P., M. D., 87 Main Street, Uniontown.
1882—BOYER, FRANCIS W., M. D., Pottsville.
1906—Bradford, Thomas Lindsley, M. D., 1862 Frankford Ave., Philadelphia.
1904—Bradley, Thomas B., M. D., 960 N. 5th Street, Philadelphia.
1883—BRANSON, MARY, M. D., 1719 Arch Street, Philadelphia.
1896—Brewer, Mary, M. D., 330 E. Chelten Ave., Gtn., Philadelphia.
1906—Brewster, F. D., M. D., 309 Jefferson Ave., Scranton.
1898—Brickley, E. N., M. D., York.
1904—Brooks, Charles M., M. D., 1409 N. 15th Street, Philadelphia.
1905—Brose, George W., M. D., 417 W. Market Street, York.
1906—Brown, C. Sheble, M. D., 3046 Frankford Ave., Philadelphia.
1905—Brown, L. S., M. D., Smith Block, Pittsburg.
1894—Brown, S. G. A., M. D., Shippensburg.
1905—Browne, William C., M. D., Burnside.
1904—Brunnell, C. M., M. D., Stroudsburg.
1893—Bryson, H. Ballou, M. D., 312 Smith Block, Pittsburg.
1886—Bulick, T. M., M. D., 317 N. Second Street, Harrisburg.
1877—BULLARD, J. A., M. D., 200 S. Franklin Street, Wilkes-Barre.
1881—BUNTING, H. M., M. D., 521 Swede Street, Norristown.
1905—Byer, J. M., M. D., Bustleton.
1906—Calhoun, John C., M. D., 803 Arch Street, Pittsburg.
1888—Carmichael, T. H., M. D., 7127 Germantown Ave., Philadelphia.
1897—Carter, Woodward D., M. D., 1311 South Broad Street, Philadelphia.
1906—Casselberry, R. C., M. D., Chester.

1898—Challinor, S. Boyd, M. D., 311 Oakland Ave., Pittsburg.
1905—Champlin, H. W., M. D., Bloomsburg.
1905—Chantler, I. B., M. D., 537 Beaver Street, Sewickley.
1875—CHAPMAN, MILLIE J., M. D., 804 Penn Ave., Pittsburg.
1900—Chase, Theo. L., M. D., 1604 Walnut Street, Philadelphia.
1905—Cheesman, Walter C., M. D., 211 N. 52d Street, Philadelphia.
1906—Chisolm, H. C., M. D., 528 Penn Street, Huntingdon.
1905—Christy, Daniel, M. D., Millvale.
1906—Clark, Edward P., M. D., Connellsville.
1902—Clark, Ernest L., M. D., Media.
1889—Clarke, Anna C., M. D., 426 Adams Ave., Scranton.
1905—Clifford, Joseph B., M. D., McKeesport.
1886—Closson J. H., M. D., 53 W. Chelten Ave., Germantown, Philadelphia.
1906—Cook, W. C., M. D., 501 Bijou Bldg., Pittsburg.
1894—Cooke, Mary A., M. D., 2113 N. 18th Street, Philadelphia.
1901—Cooper, R. C., M. D., 1111 Federal Street, Allegheny.
1895—Cooper, Wm. H., M. D., Oakmont.
1882—CRANCH, EDW., M. D., 109 W. Ninth Street, Erie.
1904—Crandell, Frank Foster, M. D., Turtle Creek.
1885—CROWTHER, ISAAC, M. D., 700 Madison Street, Chester.
1905—Culin, William D., M. D., 708 N. 40th Street, Philadelphia.
1906—Dean, H. G., M. D., New Castle.
1906—Dehoff, J. W., M. D., 480 W. Market Street, York.
1906—Deming, Ralph, M. D., 1833 Chestnut Street, Philadelphia.
1866—DETWILLER, JOHN J., M. D., 52 Centre Square, Easton.
1903—De Witt, G. M., M. D., Board of Trade Bldg., Scranton.
1905—Diehl, Reuben O., M. D., Manheim.
1886—Dietz, W. G., M. D., 21 N. Vine Street, Hazleton.
1904—Doyle, Wm. Francis, M. D., Pottsville.
1891—Drake, J. C. Merle, M. D., 720 Sassafrass Street, Erie.
1905—Dreher, C. B., M. D., Tamaqua.
1867—DUDLEY, PEMBERTON, M. D., 1405 N. 16th Street, Philadelphia.
1906—Dunning, T. S., M. D., 1328 N. 15th Street, Philadelphia.
1906—Ealer, Percy H., M. D., 2027 Spring Garden Street, Philadelphia.
1901—Elliott, J. D., M. D., 334 S. 15th Street, Philadelphia.

1873—EDMUNDSON, W. F., M. D., 1321 Fifth Ave., Pittsburg.
1904—Ervin, J. H., M. D., Jenkintown.
1905—Erwin, William, M. D., 4844 Cedar Ave., Philadelphia.
1906—Farrington, E. A., M. D., 1626 Walnut Street, Philadelphia.
1904—Fehr, H. A., M. D., Allentown.
1904—Felsberg, Paul F., M. D., 1435 Girard Ave., Philadelphia.
1905—Fisher, G. S., M. D., Lebanon.
1906—Fischer, J. A., M. D., 505 Green Street, Philadelphia.
1904—Fleagle, Maurice M., M. D., Hanover.
1905—Follmer, W. H., M. D., Milton.
1906—Fox, Charles D., M. D., 2126 Pine Street, Philadelphia.
1906—Frank, J. W., M. D., 114 N. 17th Street, Phi'ade'phia.
1905—Fulmer, Charles R., 1211 W. Allegheny Ave., Philadelphia.
1873—FULTON, H. W., M. D., 325 N. Highland Ave., Pittsburg.
1902—Furman ,Horace S., M. D., 1705 Tioga Street, Philadelphia.
1905—Gaggin, Verner S., M. D., 5182 Liberty Ave., Pittsburg.
1906—Gal agher, Michael F., M. D., 1514 N. 18th Street, Philadelphia.
1898—Gann, G. W., M. D., Du Bois.
1904—Garis, Frank A., M. D., Bethlehem.
1904—Garner, Albert Rowland, M. D., Norristown.
1901—Gates, W. D., M. D., Indiana.
1904—Gay, H. M., M. D., 1687 N. 54th Street. Philadelphia.
1906—Gerberich, D. P., M. D., Lebanon.
1886—Gerhart, Jos. M., M. D., 1127 Mt. Vernon Street, Philadelphia.
1904—Gerhart, Weber L., M. D., 36 S. 3d Street, Lewisburg.
1891—Gilbert, Irwin B., M. D., 2027 Columbia Ave., Philadelphia.
1894—Gittens, Theodore P., M. D., 1716 Diamond Street, Philadelphia.
1905—Gladwin F. E., M. D., 2204 N. 17th Street, Philadelphia.
1891—Goff, Ella D., M .D., Library Place, N. Diamond Street, E. Allegheny.
1903—Golden, G. Morris, M. D., 1449 Venango Street, Philadelphia.
1875—GOODNO, W. C., M. D., 1603 Walnut Street, Philadelphia.
1883—GRAMM, EDWARD M., M. D., 1833 Chestnut Street, Philadelphia.

1883—GRAMM, THEO. J., M. D., 846 N. Broad Street, Philadelphia.
1904—Gray, T. C., M. D., Easton.
1895—Gregg, Edw. R., M. D., 334 S. Highland Ave., Pittsburg.
1905—Greno, R. M., M. D., Arnold.
1905—Griffith, J. B., M. D., Lewistown.
1888—Griffith, Louis B., M. D., 2449 Columbia Ave., Philadelphia.
1905—Griggs, William B., M. D., 1449 N. 10th Street, Philadelphia.
1874—GUERNSEY, J. C., M. D., 1923 Chestnut Street, Philadelphia.
1894—Haas, George H., M. D., 121 N. 8th Street, Allentown.
1885—HAINES, O. S., M. D., 137 N. 15th Street, Philadelphia.
1904—Haller, George C., M. D., 4564 Wayne Ave., Philadelphia.
1887—Haman, W. A., M. D., 122 N. 8th Street, Reading.
1906—Hamilton, Samuel, Jr., M. D., Homœopathic Hospital, Pittsburg.
1904—Hammond, W. Nelson, M. D., 1424 Poplar Street, Philadelphia.
1899—Harner, D. W., M. D., 1930 Chestnut Street, Philadelphia.
1891—Harpel, F. E., M. D., 211 Ferry Street, Danville.
1904—Harpel, G. W., M. D., Mt. Carmel.
1884—HARRIS, D. R., M. D., 41 N. Jefferson Street, New Castle.
1906—Hartley, Arthur, M. D., 2101 Susquehanna Ave., Philadelphia.
1904—Hartman, G. Willis, M. D., 1207 N. 3d Street, Harrisburg.
1883—HASSLER, W. A., M. D., 105 N. 8th Street, Allentown.
1895—Heilner, H. F., M. D., Scranton.
1905—Heimbach, A. E., M. D., Renovo.
1905—Heimbach, J. M., M. D., Kane.
1899—Hendrixson, Lewis H., M. D., 5615 Wyalusing Ave., Philadelphia.
1892—Heritage, A. C., M. D., Jenkintown.
1904—Heritage, J. B., M. D., Langhorne.
1904—Hess, H. P., M. D., Pine Grove.
1902—Heysinger, Isaac W., M. D., 1521 Poplar Street, Philadelphia.
1892—Hill, E. H., M. D., Pittston.
1906—Hillegas, Wm. M., M. D., 1001 Belmont Ave., Philadelphia.
1882—HOFMAN, C. H., M. D., 510 S. Highland Ave., Pittsburg.

1903—Holben, Malcolm D., M. D., Slatington.
1883—HOLBEN, M. J., M. D., Slatington.
1905—Holcombe, William B., M. D., 1509 Girard Ave., Philadelphia.
1905—Hollowell, James, M. D., Parkesburg.
1906—Holsberg, W. H., M. D., 927 Cumberland Street, Lebanon.
1904—Hood, Joseph R., M. D., Sewickley.
1906—Hornecker, J. C., M. D., 3813 Forbes Ave., Pittsburg.
1904—Howell, Frederick E., M. D., 307 N. 5th Street, Reading.
1889—Hoy, H. K., M. D., 1203 Fourteenth Street, Altoona.
1905—Huber, W. H., M. D., Edge Hill.
1905—Humes, James R., M. D., Hollidaysburg.
1905—Humes, John H., M. D., Hollidaysburg.
1904—Humphreys, E., M. D., 131 N. 15th Street, Philadelphia.
1905—Hunsicker, William C., M. D., 130 N. 18th Street, Philadelphia.
1905—Huston, Arthur F. P., M. D., 22 N. Diamond Street, W., Allegheny.
1906—Imes, Thomas C., M. D., 518 S. 15th Street, Philadelphia.
1886—Ingersoll, W. K., M. D., 4008 Chestnut Street, Philadelphia.
1903—James, D. B., M. D., 1819 Chestnut Street, Philadelphia.
1867—JAMES JOHN E., M. D., 1521 Arch Street, Philadelphia.
1902—James, John Edwin, Jr., M. D., 1819 Chestnut Street, Philadelphia.
1906—Jamison, M. R., M. D., Greensburg.
1881—JOHNSON, THEODORE M., M. D., 200 Susquehanna Ave., Pittston.
1901—Johnston, Anna, M. D., 5115 Liberty Ave., Pittsburg.
1905—Johnston, J. E., M. D., 7035 Hamilton Ave., Pittsburg.
1889—Kase, Edmund H., M. D., 1325 Girard Ave., Philadelphia.
1891—Kaufman, John, M. D., Hazleton.
1905—Kauffman, A. B., M. D., 28 E. Walnut Street, Lancaster.
1885—KEIM, WILLIAM H., M. D., 1716 N. 18th Street, Philadelphia.
1905—Keller, J. D., M. D., 139 Carlisle Street, Hanover.
1905—Kessler, H. D., M. D., Altoona.
1904—Kiefer, J. D., M. D., Mt. Carmel.
1901—Kinney, C. Spencer, M. D., Easton.
1906—Kistler, A. L., M. D., N. E. Cor. 9th and Linden Streets. Allentown.

1904—Kistler, Grant M., M. D., Lansford.
1904—Kistler, Horace E., M. D., 313 Main Street, Johnstown.
1904—Kistler, J. S., M. D., Shenandoah.
1904—Kistler, M. S., M. D., Shenandoah.
1905—Kistler, Seth W., M. D., Nanticoke.
1904—Kistler, W. F., M. D., Minersville.
1891—Kline, D. C., M. D., 5th and Chestnut Streets, Reading.
1905—Klock, H. A., M. D., Mahanoy City.
1906—Knerr, Bayard, M. D., 12th and Spruce Streets, Philadelphia.
1877—KNERR, C. B., M. D., 1833 Chestnut Street, Philadelphia.
1872—KORNDŒRFER, AUGUSTUS, SR., M. D., 1728 Green Street, Philadelphia.
1896—Korndœrfer, Augustus, Jr., M. D., 142 N. 18th Street, Philadelphia.
1900—Kreider, J. H., M. D., Lykens.
1900—Kressley, J. A., M. D., New Tripoli.
1896—Krusen, Edward A., M. D., Collegeville.
1905—Lacy, Henry A., M. D., 743 N. 17th Street, Philadelphia.
1903—Lane, Nathaniel F., M. D., 1620 Green Street, Philadelphia.
1888—Layman, Alfred, M. D., 1630 N. 18th Street, Philadelphia.
1905—Leopold, H. P., M. D., 332 W. Chelten Ave., Philadelphia.
1905—Leslie, Edward C., M. D., 5815 Penn Ave., Pittsburg.
1905—Levis, George E., M. D., 1746 Orthodox Street, Philadelphia.
1894—Lichtenwalner, A. B., M. D., 2435 N. 7th Street, Philadelphia.
1906—Livingston, M. W., M. D., Latrobe.
1905—Locke, M. J., M. D., Bellefonte.
1905—Longwell, Demerest W., M. D., Tioga.
1904—Longwell, J. P., M. D., Wellsboro.
1904—Loos, Julia C., M. D., 705 N. 2d Street, Harrisburg.
1868—MACFARLAND, MALCOLM, M. D., 1805 Chestnut Street, Philadelphia.
1886—Maddux, D. P., M. D., 801 Madison Street, Chester.
1906—Malin, William H., M. D., 8408 Germantown Ave., Chestnut Hill, Philadelphia.
1905—Mann, S. S., M. D., Columbia.
1906—Mansfield, Harry K., M. D., 19 W. Chelten Ave., Germantown, Philadelphia.
1881—MANSFIELD, J. R., M. D., 5620 Germantown Ave., Philadelphia.

1904—Mantz, E. S., M. D., South Bethlehem.
1906—Marks, William F., M. D., 118 N. 9th Street, Reading.
1906—Marsden, Biddle R., M. D., Chestnut Hill, Philadelphia.
1883—MARSHALL, ANNA M., M. D., 1420 Chestnut Street, Philadelphia.
1891—Marshall, R. S., M. D., 424 Shady Ave., Pittsburg.
1905—Marshall, Watson, M. D., 424 Shady Ave., Pittsburg.
1877—MARTIN, W. J., M. D., 1712 Carson Street, S. S. Pittsburg.
1906—Martin, W. Joline, M. D., Wilkinsburg.
1905—Massey, Franklin F., M. D., Womelsdorf.
1904—Matlack, Thomas, M. D., 2356 E. York Street, Philadelphia.
1878—MAURER, J. M., M. D., Washington.
1905—McCauley, E. S. H., M. D., Beaver.
1891—McCauley, J. C., M. D., 128 Connecticut Street, Rochester.
1879—McCLELLAND, J. B., M. D., 409 Penn Ave., Pittsburg.
1867—McCLELLAND, J. H., M. D., 5th and Wilkins Ave., Pittsburg.
1884—McCLELLAND, R. W., M. D., 5th and Wilkins Ave., Pittsburg.
1883—McCLURE, ELIZA H. LANG, M. D., 1919 Wallace Street, Philadelphia.
1893—McCracken, William, M. D., 2110 Carson Street, Pittsburg.
1903—McDowell, A. S., M. D., 155 N. 5th Street, Reading.
1906—Mercer, Edward W., M. D., 1705 Arch Street, Philadelphia.
1871—MERCER ROBERT P., M. D., 223 W. 3d Street, Chester.
1905—Mercer, Warren C., M. D., 1705 Arch Street, Philadelphia.
1896—Merrell, A. F., M. D., Hallstead.
1905—Metzger, Irwin D., M. D., Tyrone.
1871—MIDDLETON, CALEB S., M. D., 1523 Girard Ave., Philadelphia.
1904—Miller, C. R., M. D., Steelton.
1904—Miller, M. L., M. D., Mohnsville, Mohn's Store P. O.
1905—Miller, Seth S., M. D., Susquehanna.
1887—Miller, Z. T., M. D., 2013 Carson Street, S. S., Pittsburg.
1900—Minahan, Thomas, M. D., Carnegie.
1875—MOHR, CHARLES, M. D., Lawnton Ave., above Oak Lane, Philadelphia.
1906—Monroe, J. E., M. D., Orange, Mass.

1893—Moon, S. B., M. D., 1314 Eighth Ave., Beaver Falls.
1901—Moore, J. E., M. D., Coraopolis.
1893—Moreland, George B., M. D., Smith Block, Pittsburg.
1906—Morris, Frederick S., M. D., 408 Second Ave., Pittsburg.
1901—Morrow, Emory H., M. D., Altoona.
1891—Mueller, G. A., M. D., Empire Bldg., Liberty Ave. and 5th Street, Pittsburg.
1906—Muhly, Edward G., M .D., 1627 S. Sixth Street, Philadelphia.
1888—Murdock, Robert, M. D., 160 S. Main Street, Wilkes-Barre.
1901—Muth, F. L., M. D., Wilmerding.
1894—Myers, Charles Elwood, M. D., 170 Green Lane, Manayunk, Philadelphia.
1904—Nicholson, Harland C., M. D., 2000 Wallace Street, Philadelphia.
1893—Northrop, H. L., M. D., 1729 Arch Street, Philadelphia.
1905—Nuss, W. W., M. D., Wissinoming, Philadelphia.
1906—Palen, Gilbert J., M. D., 1831 Chestnut Street, Philadelphia.
1896—Palmer, Charles R., M. D., West Chester.
1904—Palmer, Wayland R., Hollidaysburg.
1906—Parker, G. W., M. D., 1404 S. 6th Street, Philadelphia.
1881—PARSONS, E. C., M. D., 275 Walnut Street, Meadville.
1897—Paxson, O. H., M. D., 1733 Arch Street, Philadelphia.
1900—Peck, John L., 332 Washington Ave., Scranton.
1881—PERKINS, C. W., M. D., 403 Broad Street, Chester.
1883—PETTINGILL, ELIZA F., M. D., 300 N. 10th Street, Philadelphia.
1891—Phillips, Joseph R., M. D., 15 E. 8th Street, Erie.
1906—Pierce, Ward I., M. D., Diamond Bank Building, Pittsburg.
1897—Piper, R. L., M. D., Tyrone.
1905—Piper, William Scott, M. D., Clearfield.
1880—PITCAIRN, HUGH, M. D., 206 State Street, Harrisburg.
1906—Plush, James A., M. D., 319 S. 10th Street, Philadelphia.
1906—Pond, Edward H., M. D., Smith Block, Pittsburg.
1886—Posey, L. P., M. D., 1435 Walnut Street, Philadelphia.
1896—Powel, Franklin, M. D., Madison and 5th Streets, Chester.
1883—POWELL, W. C., Jr., M. D., Bryn Mawr.
1871—PRATT, TRIMBLE, M. D., Media.
1900—Prizer, E. T., M. D., Lancaster.

1896—Pursell, James P., M. D., 419 Connell Bldg., Scranton.
1904—Quackenbush, F. B., 4700 Chester Ave., Philadelphia.
1906—Ramsey, H. E., M. D., 713 Arch Street, Allgheny.
1897—Raue, C. Sigmund, M. D., 1626 Walnut Street, Philadelphia.
1906—Reading, J. H., M. D., 1811 Green Street, Philadelphia.
1906—Reading, L. W., M. D., 1629 Green Street, Philadelphia.
1888—Reading, Thomas, M. D., Hatboro.
1896—Redman, John L., M. D., 1336 Spruce Street, Philadelphia.
1906—Reeves, Joseph M., M. D., 1525 Spruce Street, Philadelphia.
1905—Reich, George R., M. D., Marietta.
1904—Reitz, J. J., M. D., Walnutport.
1905—Rhodes, C. M., M. D., 914 N. 6th Street, Harrisburg.
1904—Richards, Charles M., M. D., 13 N. 9th Street, Reading.
1905—Richards, F. L., M. D., Berwyn.
1896—Ridge, Jonathan T., M. D., 1617 N. 7th Street, Philadelphia.
1878—RINEHART, C. C., M. D., 4637 Centre Ave., Pittsburg.
1904—Rochester, J. R., M. D., 863 N. 7th Street, Philadelphia.
1906—Roman, Desiderio, M. D., 1429 Poplar Street, Philadelphia.
1906—Roscoe, H. A., M. D., Diamond Bank Building, Pittsburg.
1905—Rosenberger, Henry D., M. D., Manheim.
1905—Roth, William F., M. D., Wilkes-Barre.
1894—Rotzell, W. E., M. D., Narberth.
1906—Sample, Clyde W., M. D., 742 Penn Ave., Wilkinsburg.
1888—Sandel, J. H., M. D., 49 Centre Ave., Plymouth.
1905—Sanderson, H. H., M. D., Johnstown.
1906—Sankey, B. E., M. D., New Castle.
1872—SARTAIN, HARRIET J., M. D., 212 W. Logan Square, Philadelphia.
1901—Sawers, F. C., M. D., 5130 Second Ave., Pittsburg.
1896—Schantz Henry F., M. D., 402 N. 5th Street, Reading.
1892—Schantz, M. Hassler, M. D., 402 N. 5th Street, Reading.
1883—SCHREINER, EMMA T., M. D., Cor. Wayne and Maplewood Aves., Germantown, Philadelphia.
1886—Seibert, W. A., M. D., 43 N. 4th Street, Easton.
1900—Seibert, Walter W., M. D., 43 N. 4th Street, Easton.
1868—SEIP, C. P., M. D., 316 N. Highland Ave., Pittsburg.
1905—Seip, Herman H., M. D., 316 N. Highland Ave., Pittsburg.
1905—Seitz, W. C., M. D., Glen Rock.

1906—Shallcross, I. G., M. D., 1631 Arch Street, Philadelphia.
1906—Shannon, S. F., M. D., 603 N. 52d Street, Philadelphia.
1905—Sharbaugh, W. J., M. D., 607 24th Street, Altoona.
1885—Shellenberger, C. N., M. D., 615 N. Tejohn Street, Colorado Springs, Colo.
1905—Shower, John A., M. D., 104 S. Beaver Street, York.
1903—Shute, A. Clement, M. D., 421 High Street, Pottstown.
1900—Simmons, C. W., M. D., 1628 N. 18th Street, Philadelphia.
1897—Simmons, S. S., M. D., Susquehanna.
1905—Simpson, K. S., M. D., Carnegie.
1906—Sloan, Malachi W., M. D., 4825 Baltimore Ave., Philadelphia.
1883—SLOUGH, F. J., M. D., 120 N. 8th Street, Allentown.
1892—Smedley, Charles D., M. D., Wayne.
1889—Smith, George W., M. D., 806 N. Broad Street, Philadelphia.
1887—Snader, E. R., M. D., 1919 Arch Street, Philadelphia.
1900—Snyder, E. S., M. D., Lancaster.
1904—Snyder, L. A., M. D., Ashland.
1894—Somerville, W. H., M. D., 1214 Hanover Street, Philadelphia.
1896—Spahr, Charles E., M. D., 10 W. Market Street, York.
1904—Speakman, William W., M. D., 1831 Chestnut Street, Philadelphia.
1889—Spencer, William, M. D., 1623 Walnut Street, Philadelphia.
1881—STAMBACH, H. L., M. D., 15 W. Victoria Street, Santa Barbara, Cal.
1906—Statler, Edgar C., M. D., 461 Linden Street, Allentown.
1905—Steele, William, Jr., M. D., 2319 N. Broad Street, Philadelphia.
1906—Stegmenn, Charles W., M. D., 4634 E. Thompson Street, Philadelphia.
1906— Steinmetz, Deacon, M. D., 1835 N. 17th Street, Philadelphia.
1891—Stephens, W. R., M. D., Wood Street, Wilkinsburg.
1904—Sterner, L. H., M. D., Porter's Sideling.
1894—Stewart, G. W., M. D., 1823 Chestnut Street, Philadelphia.
1903—Stewart, Wm. A., M. D., Lang and Thomas Aves., Pittsburg.
1901—Stitzel, J. W., M. D., Hollidaysburg.
1906—Stokes, Lydia W., M. D., 1719 Arch Street, Philadelphia.
1904—Straub, D. W., M. D., Bethlehem.

1904—Straub, E. L., M. D., Minersville.
1905—Strock, Henry B., M. D., Bedford.
1885—STRONG, J. WILMER, M. D., 2049 N. 13th Street, Philadelphia.
1889—Strong, Walter, M. D., 2105 N. 13th Street, Philadelphia.
1904—Summers, Robert S., M. D., 2610 N. 12th Street, Philadelphia.
1904—Super, A. H., M. D., Tamaqua.
1896—Sureth, Theodore, M. D., 1821 N. Main Ave., Scranton.
1905—Sutton, John C., M. D., New Brighton.
1904—Swalm, T. W., M. D., Pottsville.
1906—Swartz, J. Ross, M. D., Harrisburg.
1906—Swick, J. Howard, M. D., Beaver Falls.
1901—Taylor, Amos O., M. D., 1415 12th Ave., Altoona.
1905—Taylor, G. P., M. D., Columbia.
1906—Tay'or, Howard W., M. D., 316 Collins Ave., Pittsburg.
1904—Tegtmeier, C. E., M. D., 1237 Shackamaxon Street, Philadelphia.
1905—Tegtmeier, C. F., M. D., Conshohocken.
1906—Terry, Howard, Jr., 226 Church Street, Phœnixville.
1906—Thatcher, J. W., M. D., 35th and Hami'ton Streets, Philadelphia.
1906—Thomas, C. L., M. D., 2802 Columba Ave., Philadelphia.
1877—THOMAS, CHARLES MONROE, M. D., 1825 Chestnut Street, Philadelphia.
1906—Thomas, Edward C., M. D., 711 N. 43d Street, Philadelphia.
1906—Thompson, J. G., M. D., New Brighton.
1886—Thompson, J. H., M. D., 515 Penn Ave., Pittsburg.
1887—Thompson, Landreth W., M. D., 1701 Green Street, Philadelphia.
1891—Tomlin, R. E., M. D., 2057 N. 8th Street, Philadelphia.
1905—Tripp, J. C., M. D., Warren Centre.
1901—Tuller, John J., M. D., 1935 Chestnut Street, Philadelphia.
1906—Tyrrel, Urania, M. D., 154 N. 20th Street, Philadelphia.
1896—Ulrich, Silvester, M. D., Middletown.
1906—Umstead, D. B., M. D., Tacony, 23d Ward, Philadelphia.
1883—VAN BAUN, W. W., M. D., 1402 Spruce Street, Philadelphia.
1886—Van Deusen, Edwin H., M. D., 2101 Tioga Street, Philadelphia.

1896—Van Lennep, G. A., M. D., 1833 Chestnut Street, Philadelphia.
1881—VAN LENNEP, W. B., M. D., 1421 Spruce Street, Philadelphia.
1898—Van Tine, J. Lewis, M. D., 1706 Girard Ave., Philadelphia.
1901—Varner, Anna D., M. D., 616 Wood Street, Wilkinsburg.
1905—Waaser, J. F., M. D., E. Mauch Chunk.
1904—Walker, H. Ellen, M. D., Sharon.
1901—Wallace, H. D., M. D., 214 Lacock Street, E. Allegheny.
1906—Walter J. A., M. D., Punxsutawny.
1896—Walter, Robert, M. D., Walters Park.
1894—Ware, H. B., M. D., Cor. Washington and Linden Streets, Scranton.
1906—Wasserman, Flora E., M. D., 1909 N. Broad Street, Philadelphia.
1904—Watson, Franklin, M. D., Willow Grove.
1894—Waylan, Julia Gould, M. D., 1832 Tioga Street, Philadelphia.
1881—WEAVER, CHANDLER, M. D., Fox Chase, Philadelphia.
1894—Weaver, H. S., M. D., 1621 Chestnut Street, Philadelphia.
1902—Weaver, W. A., M. D., 1534 Master Street, Philadelphia.
1894—Webster, Samuel C., M. D., Media.
1905—Wells, G. Harlan, M.D., 1623 Arch Street, Philadelphia.
1905—Wesner, M. A., M. D., 407 Franklin Street, Johnstown.
1906—White, A. Grace, M. D., Bradford.
1889—White, Roland T., M. D., 914 Western Ave., Allegheny.
1904—Wiest, Harry G., M. D., Schuylkill Haven,
1899—Wilford, H. H., M. D., Bangor.
1906—Willard, Lewis D. W., M. D., 955 Western Ave., Allegheny.
1870—WILLETS, WILLIAM, M. D., Williamsport.
1903—Williams, Harry E., M. D., Coatesville.
1905—Williams, Olin A., M. D., Butler.
1906—Williamson, M. S., M. D., 1311 Arch Street, Philadelphia.
1905—Wilson, M. A., M. D., 140 E. 8th Street, Erie.
1904—Wooldridge, F. V., M. D., 408 2d Avenue, Pittsburg.
1904—Yale, Arthur W., M. D., 1901 Park Avenue, Philadelphia.
1905—Yeagley, J. H., M. D., 127 E. Market Street, York.
1905—Yeagley, J. M., M. D., 144 N. Prince Street, Lancaster.
1906—Yocom, C. A., M. D., 365 Chestnut Street, Pottstown.
1880—YODER, DANIEL, M. D., Catasauqua.

1894—Ziegenfus, A. Frank, M. D., 1124 Wallace Street, Philadelphia.

HONORARY MEMBERS.

1883—Allen, H. C., M. D., 5142 Washington Ave., Chicago, Ill.
1898—Custis, J. B. Gregg, M. D., 110 E. Capitol Street, Washington, D. C.
1876—Jones, S. A., M. D., Ann Arbor, Mich.
1900—Nash, E. B., M. D., Cortland, New York.
1883—Phillips, W. A., M. D., Cleveland, Ohio.
1898—Porter, Eugene H., M. D., 181 W. 73d Street, New York.
1892—Williamson, Alonzo P., M. D., Patton, San Bernardino Co., Cal.

CORRESPONDING MEMBERS.

1873—Alvarez, Paz, M. D., Madrid, Spain.
1873—Chauvet, Fernand, M. D., Tours, France.
1873—Eidherr, Francis, M. D., Vienna, Austria.
1893—Pope, Alfred C., M. D., London, England.

NECROLOGICAL LIST.

1902—Adams, W. K., M. D., died July 17th, 1903.
1866—Ashton, A. H., M. D., died February 18th, 1883.
1899—Baker, Daniel J., died July 30, 1902.
1866—Barnaby, John E., M. D., died January 5th, 1869.
1867—Barrett, Charles B., M. D., died June 5th 1871.
1882—Bernard, H., M. D., died ———.
1903—Bigler, Bernard E., M. D., died February 20th, 1905.
1872—Bigler, William H., M. D., died December 10th, 1904.
1866—Blakeley, W. James, M. D., died January 14th, 1877.
1884—Boyd, G. S., M. D., died May 10th, 1901.
1870—Bratt, Benjamin R., M. D., died January 31st, 1872.
1895—Brierly, Frank Walter, M. D., died June 17th, 1899.
1866—Brooks, Silas S., M. D., died July 2d. 1871.
1883—Brown, Samuel, M. D., died March 22d, 1892.
1891—Brown, Wm. K., M. D., died October 3d, 1900.
1885—Buchman, Francis, M. D., died July 14th, 1898.
1891—Burlingame, F. W., M. D., died ———.
1883—Burr, Richard, M. D., died March 30th, 1885.
1873—Caruthers, R. E., M. D., died January 3d, 1885.
1868—Charlton, S. T., M. D., died November 9th, 1886.
1863—Childs, William R., M. D., died November 11th, 1888.
1883—Coe, Sarah J., M. D., died November 4th, 1903.
1866—Cook, William H., M. D., died March 11th, 1879.
1866—Cooper, John F., M. D., died August 19th, 1899.
1866—Cote, M., M. D., died May 29th, 1878.
1866—Cowley, David, M. D., died October 30th, 1886.
1898—Cresson, Charles C., M. D., died ———.
1868—Dake, J. P., M. D. (honorary), died October 28th, 1894.
1891—Davis, B. L., M. D., died ———
1866—Detweiler, Henry, M. D., died April 21st, 1887.
1886—Dowling, John W., M. D. (honorary), died January 14th, 1892.
1871—Dreibelbis, David L., M. D., died March 24th, 1872.

1878—Duff, P. S., M. D., died April 1st, 1904.
1870—Earhart, Jacob R., M. D., died June 23d, 1891.
1891—Ely, J., M. D., died ———.
1870—Farrington, E. A., M. D., died December 17th, 1885.
1880—Ferson, John L., M. D., died July 12th, 1896.
1866—Freise, Michael, M. D., died February 4th, 1880.
1866—Frost, J. H. P., M. D., died January 21st, 1875.
1889—Gangloff, Charles, M. D., died January 22d, 1898.
1866—Gardiner, Richard, M. D., died March 22d, 1877.
1866—Gause, O. B., M. D., died January 11th, 1895.
1905—Gerberich, M. B., M. D., died November 1st, 1905.
1899—Godshall, Samuel G., M. D., died April 4th, 1903.
1867—Gramm, Gustavus E., M. D., died November 2d, 1901.
1886—Griffith, Jethro J., M. D., died July 5th, 1893.
1881—Griffith, Silas, M. D., died May 21st, 1904.
1877—Griffith, Wm. M., M. D., died April 20th, 1903.
1877—Grumbeid, William, M. D., died ———.
1866—Guernsey, H. N., M. D., died June 27th, 1885.
1870—Guernsey, W. F., M. D., died February 16th, 1877.
1867—Gumpert, B. Barton, M. D., died June 23d, 1904.
1895—Hall, William D., M. D., died August 2d, 1897.
1883—Hancock, Joseph, M. D., died January 19th, 1906.
1904—Harry, F. M., M. D., died November 20th, 1905.
1888—Hawley, S. B., M. D., died March 6th, 1890.
1868—Helmuth, William Tod, M. D. (honorary), died ———
1866—Herron, James A., M. D., died November 15th, 1868.
1866—Hofmann, Herman H., M. D., died April 4th, 1891.
1886—Holcombe, John Randolph, M. D., died December 17th, 1896.
1884—Hosfeld, George, M. D., died November 9th, 1884.
1873—Houard, J. G., M. D., died April 24th, 1878.
1885—Houghton, Henry C., M. D. (honorary), died ———.
1882—Ivins, Horace F., M. D., died January 1st, 1899.
1866—James, Bushrod W., died January 6th, 1903.
1866—James, David, M. D., died June 6th, 1873.
1866—Jeanes, Jacob, M. D., died December 18th, 1877.
1866—Koch, Augustus W., M. D., died May 4th, 1886.
1889—Lazear, Lyttleton L., M. D., died ———, 1898.
1866—Lee, J. K., M. D., died November 10th, 1887.
1869—Lee, John K., M. D., died May 31st, 1899.

1894—Lentz, Levi R., M. D., died May 27th, 1902.
1876—Lilienthal, S., M. D. (honorary), died October 3d, 1891.
1867—Lippe, Adolph, M. D., died January 23d, 1888.
1871—Lovejoy, E., M. D. (honorary), died August 15th, 1872.
1868—Malin, George W., M. D., died January 18th, 1883.
1886—Malin, John, M. D., died November 29th, 1889.
1866—Marsden, J. H., M. D., died August 27th, 1883.
1865—Martin, Henry Noah, M. D., died September 1st, 1889.
1881—May, Newton, M. D., died January 27th, 1889.
1866—McClatchey, R. J., M. D., died January 15th, 1883.
1887—Millen, J. C., M. D., died ———, 1901.
1870—Moore, Thomas, M. D., died March 25th, 1882.
1867—Morgan, John Coleman, M. D., died June 27th, 1899.
1866—Neville, W. H. H., M. D., died January 22d, 1904.
1873—Nichol, Thos., M. D. (corresponding), died June 14th, 1890.
1869—Ostrander, W. M., M. D., died August 23d, 1881.
1868—Paine, H. M., M. D. (honorary), died December 5th, 1903.
1868—Payne, Wm. E., M. D. (honorary), died March 9th, 1877.
1878—Pereira, Ignacio, M. D. (corresponding), died April 18th, 1881.
1894—Peters, J. Elwood, M. D., died ———, 1904.
1868—Pfoutz, J. S., M. D., died ———.
1866—Preston, Coates, M. D., died August 9th, 1881.
1868—Pulte, J. H., M. D. (honorary), died February 24th, 1884.
1882—Pursel, J. E., M. D., died March 15th, 1885.
1872—Rankin, John Stephen, M. D., died April 21st, 1899.
1866—Raue, Charles G., M. D., died August 21st, 1896.
1867—Reading, Edward, M. D., died March 7th, 1889.
1866—Reading, John R., M. D., died February 14, 1886.
1870—Reinhold, H. E., M. D., died March 6th, 1879.
1871—Rittenhouse, S. R., M. D., died June 26th, 1895.
1895—Roberts, C. W., M. D., died March 20th, 1903.
1866—Roberts, R. Ross, M. D., died April 4th, 1875.
1887—Rodes, Joseph, M. D., died ———, 1898.
1866—Rosseau, L. M., M. D., died September 25th, 1882.
1874—Schmucker, Francis R., M. D., died ———.
1872—Scott, James L., M. D., died August 15th, 1876.
1883—Sharkey, W. P., M. D., died August ———, 1903.
1892—Shoemaker, D. W., M. D., died April 27th, 1904.

1883—Skeels, James S., M. D., died ———, 1891.
1880—Smedley, Isaac G., M. D., died December 1st, 1899.
1870—Spencer, J. H., M. D., died ———.
1872—Speth, W. F., M. D., died May 11th, 1881.
1889—Starr, Pearl, M. D., died July ———, 1900.
Stauffer, D. R., M. D., died March 16th, 1874.
1894—Steele, William G., M. D., died April 30th, 1906.
1867—Stevens, C. A., M. D., died January 17th, 1881.
1868—Talbot, I. Tisdale, M. D. (honorary), died July 2d, 1899.
1870—Taudte, F., M. D., died March 27th, 1878.
1902—Taylor, William Gardiner, M. D., died March 4th, 1904.
1871—Thomas, Amos R., M. D., died October 31st, 1895.
1891—Tindall, Harry Brooks, M. D., died January 9th, 1892.
1882—Trites, W. B., M. D., died January 19th, 1890.
1889—Visher, Carl V., M. D., died May 13th, 1906.
1867—Walker, Mahlon M., M. D., died March 31st 1896.
1870—Waters, George H., M. D., died ———, 1892.
1880—Way, J. H., M. D., died September 3d, 1887.
1866—Willard, Lewis H., M. D., died July 30th, 1906.
1866—Williams, Thomas C., M. D., died October 1st, 1899.
1866—Williamson, Walter M., M. D., died December 19th, 1870.
1866—Williamson, Walter, M. D., died May 5th, 1874.
1868—Wood, James B., M. D., died April 14th, 1889.
1904—Yerkes, Frank E., M. D., died December 22d, 1904.
1897—Yetter, A. F., M. D., died May 8th, 1898.
1874—Young, J. H., M. D., died June 21st, 1894.
1880—Zerns, Wm. M., M. D., died September 21st, 1887.

MEMBERS AND VISITORS REGISTERED AT THE MEETING.

T. L. Adams.
J. V. Allen.
R. C. Allen.
A. B. Arthur.
L. T. Ashcraft.
H. E. Aldrich.

G. F. Baier.
A.W. Baily.
C. H. Baker.
W. F. Baker.
C. W. Bartine.
Clarence Bartlett.
O. A. Bassett.
Margaret H. Beeler.
J. E. Belville.
Ralph Bernstein.
B. F. Betts.
N. S. Betts.
J. T. Biddle.
C. F. Bingaman.
T. L. Blackledge.
E. M. Blake.
J. D. Boileau.
P. L. Bolsinger.
W. K. Bouton.
T. B. Bradley.
Mary Branson.
C. S. Brown.
S. G. A. Brown.
H. M. Bunting.
Margaret E. Burgess.

T. H. Carmichael.
W. D. Carter.
R. C. Casselberry.
W. B. Chalfant.
Millie J. Chapman.
T. L. Chase.
W. C. Cheesman.
Anna C. Clarke.
Edgar Clement.
Mary E. Coffin.
M. W. Conrow.
Mary A. Cook.
R. C. Copeland
W. G. Cowperthwait.
Isaac Crowther.

H. G. Dean.
Ralph Deming.
F. P. Dickinson.
Pemberton Dudley.
P. H. Dudley.
T. S. Dunning.
F. B. Edmundson.
W. F. Edmundson.
J. E. Elliott.

E. A. Farrington.
P. F. Felsberg.
M. M. Fleagle.
B. Fleming.
John Fleming.
J. W. Frank.
A. E. Frankland.

A. R. Garner.
J. M. Gerhart.
W. L. Gerhart.
Mrs. W. L. Gerhart.
I. B. Gilbert.
T. P. Gittens.
Ella D. Goff.
Mrs. M. B. Goff.
G. M. Golden.
J. M. Goodman.
E. M. Gramm.
T. J. Gramm.
J. B. Griffith.
Mrs. J. B. Griffith.
L. B. Griffith.
W. B. Griggs.
F O. Gross.

G. H. Haas.
P. S. Hall.
O. S. Haines.
G. C. Haller.
E. S. Hallinger.
W. N. Hammond.
R. J. Harris.
Arthur Hartley.
G. W. Hartman.
A. E. Heimbach.
L. H. Hendrixson.
Amelia L. Hess.
E. H. Hill.
W. M. Hillegas.
W. H. Holsberg.
Dora L. Horn.
F. E. Howell.
J. W. Hughes.
Edward Humphreys.
W. C. Hunsicker.

T. C. Imes.
W. K. Ingersoll.

R. Alice Jaffa.
D. B. James.
J. E. James.
J. E. James, Jr.
T. M. Johnson.
Anna Johnston.

J. D. Keller.
Mrs. J. D. Keller.
W. H. Keim.
C. S. Kinney.
S. T. Kinney.
M. S. Kistler.
D. C. Kline.
Bayard Knerr.
I. W. Knight.
Aug. Korndœrfer, Sr.
Aug. Korndœrfer, Jr.
J. H. Kreider.
J. A. Kressley.

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N. F. Lane.
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Thomas Matlack.
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Mrs. J. C. McCauley.
Wallace McGeorge.
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H. K. Miller.
Z. T. Miller.
Charles Mohr.
S. B. Moon.
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G. B. Moreland.
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B. H. Ogden.

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R. R. Paxson.
O. H. Paxson.
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J. M. Peterson.
R. L. Piper.
W. S. Piper.
L. P. Posey.

F. B. Quackenbush.
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C. S. Raue.
Anna Ray.
J. H. Reading.
L. W. Reading.
E. R. Richie.
C. M. Rhodes.
J. R. Rochester.

C. W. Sample.
J. H. Sandel.
S. W. Sappington.

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H. F. Schantz.
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Emma T. Schreiner.
W. A. Seibert.
C. P. Seip.
Mrs. C. P. Seip.
H. H. Seip
C. W. Seybert.
S. F. Shannon.
A. C. Shute.
M. W. Sloan.
C. R. Smith.
F. C. Smith.
G. W. Smith.
E. R. Snader.
William Spencer.
C. W. Stegmenn.
Deacon Steinmetz.
G. W. Stewart.
W. K. Stewart.
J. W. Stitzel.
Lydia W. Stokes.
T. M. Strong.
R. S. Summers.

H. Terry, Jr.
J. W. Thatcher.
C. M. Thomas.
C. S. Thomas.
E. C. Thomas.
R. E. Tomlin.
J. C. Tripp.
Edwina D. Tuck.
J. E. Tuller.
Urania Tyrrel.

J. L. Van Tine.
Anna D. Varner.
G. A. Van Lennep.
W. B. Van Lennep.

L. I. Walker.
J. C. Wallace.
H. B. Ware.
Chandler Weaver.
H. S. Weaver.
W. A. Weaver.
G. H. Wells.
A. Grace White.
F. S. Whitman.
M. S. Williamson.
Evelyn Wimer.
F. V. Wooldridge.

A. W. Yale.

PAPERS

AND

DISCUSSIONS

REPORT OF THE

SECTION OF PATHOLOGY AND PATHOLOGICAL ANATOMY.

Acne, by E. H. Pond, M. D.
The Specific Action on the Kidneys of Kali Chloricum, by F. V. Wooldridge, M. D.

ACNE.

EDWARD H. POND, M. D., PITTSBURGH.

Acne is an inflammatory disease of the sebaceous glands of the skin and of the follicles of the lanugo hairs attached to them; it appears in a form of papules, tubercles, pustules or abscesses, and in cases of severe inflammation and suppuration often leads to the destruction of the glands with the resulting scar. On account of its proneness to attack the face and neck, and the disfigurement it gives rise to, and in the great majority of cases appearing in youth, a time of life when the afflicted are most concerned as to their appearance, it is the cause of mortification and mental distress out of all proportion to its severity. It very seldom occurs after middle age is reached.

The term "acne" has been applied to a number of lesions which have nothing in common with true acne, its etiology or pathology. Amongst these are drug eruptions, whether due to the ingestion of the drug or its local application, tuberculous affections of the skin and rosacea. It has been classified into a number of varieties according to certain clinical characteristics. All, however, represent the same pathological process, the varieties being due to the various

stages of development and different degrees of severity in different individuals. For practical purposes the disease may be divided into three varieties, acne papulosa, acne pustulosa and acne indurata.

Acne papulosa is the mildest form of the disease, and the eruption consists of small reddish acuminate papules, often mingled with comedones. They show little tendency to suppurate, each lesion, after a considerable length of time, gradually disappearing.

Acne pustulosa is the most frequently observed variety. The lesion begins as a small papule which soon suppurates, and after a few days, if not interfered with, gradually loses its redness, a crust forms, which, after a time falls off, leaving a slight stain or scar; or, if the suppuration has been severe, pitting may result. Generally all stages of the eruption may be observed upon the affected surface, new lesions constantly appearing as the older ones disappear, thus continuing the affection for months or years.

Acne indurata is a deeper seated form of the disease, differing in degree and extent of the suppuration. The lesions are large with infiltrated bases and often painful; they vary in size from a small pea to a hazelnut. They originate deep in the dermal structure, the inflammation not being limited to the gland, but involving the surrounding tissues. They vary in color from a bright red to a purple, and in shape may be round or elongated, and, if two or more contiguous glands become involved in the inflammation, sebaceous abscesses may result.

Suppuration may occur very rapidly, but generally the formation of the indurated area into a pus cavity is very slow, and often the process is limited to the central portion of the induration. The pustule does not rupture spontaneously, and unless opened mechanically, it gradually undergoes involution, and after weeks or months may finally disappear. After evacuation of the cavity, unless means are employed to prevent, it is very apt to refill. This form is often following by scarring, and not infrequently the scars become keloidal in character.

The pathological changes always begin about a follicle; the tissues are infiltrated with round cells, which are located at first around the network of blood vessels supplying the sebaceous glands attacked. In acne papulosa and pustulosa this induration extends only about the duct and upper part of the gland; in acne indurata it is deeper and involves the body of the gland and extends widely

into the surrounding tissues. The body of the gland having become inflamed its parenchyma becomes infiltrated, its cavity is distended, and its walls rupture. A section of an acne pustule shows not only the papillæ but the deeper layers of the cutis œdematous, and filled with leucocytes and pus corpuscles, and the small blood vessels much dilated. The acinus and duct of the gland are filled with pus, often mingled with blood disks. In the larger pustules the hair sac into which the sebaceous gland opens becomes affected, and the entire follicle may become destroyed. When the suppuration has extended deeply enough to disorganize the papillæ a scar always results after the acne is cured.

The micro-organisms, staphylococcus pyogenes aureus and albus ordinarily found associated with the formation of pus are generally discoverable in the lesions, and the disease has been ascribed to the infection of the glands by these pyogenic germs. Various investigators have claimed to have discovered specific micro-organisms to which the disease is due. However, as each observer has ascribed a different causative germ as its etiological factor, it leaves the entire matter in such a state of confusion, which, together with the fact that no inoculation experiments have been carried out, no absolute decision as to their causal relation can be made. They may, or not, bear an etiological relationship to the disease, but if so they are only one of the causative factors.

If the lesion is due to any infection, such infection can only take place in a soil adapted to its growth and development. This vulnerable condition of the skin is no doubt due to some toxic agent in the circulation which is attempting to be eliminated, producing an irritation of the glands with subsequent inflammation and pustulation. That this condition is due in the majority of cases to the formation of volatile fatty acids produced by gastric or intestinal derangements is probable.

In no other disease of the skin are the underlying causative factors so frequently demonstrable. In a large series of cases studied, constipation was found in 83 per cent., dyspepsia and gastric dilatation in a considerable number, and in a few sexual reflexes seem to conduce to the disease. In women it is almost invariably aggravated during the menstrual period. That the disease should show such a remarkable proneness to appear at about the age of puberty, and a few years subsequent, is no doubt due to the in-

creased activity of the sebaceous glands at this period of life, and their susceptibility to inflammatory reaction from slight irritation.

In the course of years nearly every case of acne will disappear, but if time does cure, it is very tedious in performance, and after such a cure is complete, the disfigurement is often considerable and irremediable.

Acne is a curable disease, and it behooves the physician to treat such cases with as much care as he would any other disease. Success depends not only upon the physician adapting his treatment to the individual case, but also upon the perseverance with which the patient will follow it out. First, in importance, is the correction of the internal pathological conditions, of which the local lesion is the outward manifestation. This will require both a thorough knowledge of the principles of hygiene and dietetics, and the ability to apply them, and a proficiency in general therapeutics and their proper adaptation to the case under consideration. But while attending to this most important part of the treatment, much can be done to hasten the disappearance of the eruption, and prevent further pustulation and consequent scarring by means of local treatment.

Numberless applications in the form of lotions and ointments have been used for this purpose with greater or less success, but the most rapid and effective local treatment lies in the proper application of photo-therapy, and particularly in the use of the Roentgen rays.

The two qualities of the X-ray which are admirably adapted to the treatment of acne are:

First, Their property of causing atrophy of the glands of the skin, the sebaceous glands as well as the hair follicles; and.

Second, Their property of destroying pathogenetic germs in the skin and in inhibiting the formation of pus.

As to the permanency of results it has been proven that relapses, when they do recur, have been mild and very tractable to further exposures. Treatment by the various forms of apparatus condensing the actinic rays from an artificial source of light, as well as sunlight, and reflecting them upon the diseased surface has been followed by marked success, and with probably less danger of doing damage than in the use of the X-ray, but with less rapid improvement. The beneficial results are due to about the same action upon the diseased glandular structures.

DISCUSSION.

Dr. Ralph Bernstein: I would like to direct attention to the investigations of Sabouraud with reference to a factor of importance in the causation of this disease. I refer to the micro-bacillus of seborrhœa. Sabouraud contends that various forms of acne are due to an infection secondary to this micro-bacillus, which may be expressed with the thumb nail, as fatty cylinders which are situated in the sebaceous pores. These cylinders may be studied beneath the microscope by slightly washing with ether and by staining by Gram's method, appearing as myriads of fine bacilli, which are a constant microbial factor in seborrhœa. I would further like to mention a follicular condition occasionally seen associated with acne and seborrhœa, known as follicular psorospermosis. This condition has been closely studied by Darier, and is characterized by brown conical crusts, which are to be seen enclosed in greatly dilated sebaceous orifices, being raised on a soft papule-like projection. The nature of this condition is probably parasitic, and is usually to be seen at the usual sites of seborrhœa, the disease is chronic in nature, and is more frequently seen in the poorer classes, the same reducing agents which are of benefit in acne are likewise of benefit in this condition.

Dr. E. M. Gramm: I am rather a heretic in regard to the statements on the causation of acne made by different authorities. I think Dr. Pond has stated the matter very truly when he says, "as each observer has described a different causative germ as its etiological factor, it leaves the entire matter in such a state of confusion" that we do not know where we are. I do not believe that a case of acne needs to develop into the condition it usually attains if the physician takes hold of it at the proper time, and if the patient follows out the directions of the physician that should be followed out by every individual when he places himself in the hands of his doctor. The time when an acne case should be treated is before it develops. That is to say, if, when the mothers and fathers of growing children find that their children are beginning, about the time of puberty, to show a few elevations where an occlusion of sebaceous follicles is taking place, they will remove those accumulations of sebaceous material in the occluded follicles, and have the child take proper care of his skin, not the skin of the face alone, but the skin

of the whole body, we will never have such a thing as the infection of the follicles of the face and the development of these unsightly lesions, which are practically the result of neglect. The average mother and father when a child presents as slight a blemish as a little blackhead neglects it, thinks that does not amount to anything, and that there is no use of considering any treatment for it, for it is only a blackhead or skin worm. Therefore, after a while infection of the occluded follicle takes place, and then the micro-organisms come into play, a secondary condition, not the original blocking up of the sebaceous material, not the constipation, not the indigestion, a local condition in 999 cases out of 1,000, but if that case be allowed to go on for months or years, as the average case does go on, then we have infection by micro-organisms. They are the streptococci, or the micro-bacillus of Sabouraud. We have them vegetating multitudinously, and infecting one gland after another. Then the disease is in full swing. Then your pathologists come along, and each one finds a different coccus or bacillus, according to the method of staining and according to the accidental conditions surrounding the given case he examines. You cannot expect to have diseased skin on one part of the body and a normal condition on another; localized disease indicates disease of the whole surface, or, at least, such a condition of affairs as to render the whole surface less resistant than it should be. You must have normal skin all over the body if you wish to have a normal condition in any certain area, and in order to bring about a normal condition of the skin children should be taught to take care of it properly. We all have gone through the process personally as well as with our children. How many of them hate to have their hands washed? When they are sent to wash themselves they come back after a lick and a promise with moist hands and faces. After a while chapping takes place, possibly eczema. Then you hunt to find what the diathesis is that produces the terible skin trouble. You are hunting in the wrong place for it. You should seek a wash-rag and towel and instil the proper method of using them, not a diathesis, a psora. So with acne. You can prevent the majority of cases of acne from developing. If you will remove the comedones in the growing child you will not have infection by the various micro-organisms, if, in addition you make the general surface resistant. Therefore, I say I am a heretic on the subject of all this hunting for etiological factors.

We are all too apt to hunt for disease conditions. Hunt for conditions of irregular living and wrong methods of taking care of the skin, and you will cure a great many more cases.

So far as local treatment is concerned, it is unquestionably true that the X-ray is far and above every method of treatment for causing the rapid disappearance of acne lesions, and it is also true, as Dr. Pond states, that if relapses occur they are slight and can be readily conquered. Why? For the very same reason that you can conquer a case readily if you take it when the child is at the time of puberty, and extract the first few comedones. Bear this in mind and you will have no trouble with acne.

Dr. Z. T. Miller: When doctors disagree the laity can take to the woods. When Dr. Gramm says that the care of the skin at any time during the life of the individual will cure all cases of acne, I do not believe it, because the truth of the matter is that the people who have acne are people that usually take the most care of their skins and have it all the same. Will Dr. Gramm please explain how it comes that young girls have acne every twenty-eight days? What has a micro-organism to do with that? Infection with micro-organisms may be a secondary condition, the result of a condition existing before the micro-organism makes its appearance, but that it should attack a girl every twenty-eight days, when she probably takes just as good care of her skin during the interim as during the menstrual period is something I do not think Dr. Gramm has explained. When Dr. Gramm makes the statement that acne is a local disease, doctors will disagree, and the poor girl that has acne can go to the woods. I do not believe that any manifestation of that kind will ever engraft itself upon a person who has not a dyscrasia of some sort. I believe as I do because we see people who never use a wash-rag from one Monday to the other, and they never have acne. I submit that as a proposition.

Dr. E. M. Gramm: As Dr. Miller asks for an explanation, I would say that I think I said just what he did, that is to say, that the infection by the micro-organisms is absolutely a secondary condition. The fact that we have occasional inflammation of sebaceous follicles (folliculitis, not acne) at the time of the menstrual period, is, of course, due to reflex conditions, but the average case of acne does not come from reflex conditions. That is the point I am trying to make. The average case of acne does not come by reason

of the patient being diseased. It comes from neglect, and I have seen many a case of acne in which I have had no success, or such poor success, that it certainly was most disagreeable to have patients come in among people who would not do as I told them. I recall two instances just now. A man came in to see me one time with fire in his eye, and said, "I am not satisfied with the way my son and daughter are getting along." I said, "Neither am I." He said, "What are you going to do about it?" I said, "Nothing. What are you going to do about it?" I said to the boy, "When were the blackheads pressed out of your face last?" He said, "I don't remember." I turned to the girl and said, "When were they pressed out of your face last?" She said, "Not since the last three or four times I have been here." I said to the man, "It is up to you. What are you going to do about it? I cannot do anything. If you people will not teach your children to take care of their skins how can you expect them to get well?" I remember another case. These were not cases in dispensary practice, they were cases from our wealthy, good people, as they like to feel that they are, who have bath-tubs galore and look at them once in a while. This case was that of a boy who came in to see me with acne, and I could not do anything with him. When he would come in I would find a fringe of dirt, I do not know how thick, all around his hair inside the hair line. He washed himself as little as he could, and thought he was following directions. Those are the cases where our materia medica men look for indications for the similimum, and that is one thing I want to speak against, the fact that we make a mistake of condemning every individual who shows lesions somewhere or other to a course of medication when it is not at all indicated. It is done every day. Treat the patient as he should be treated, not by local medicinal measures, not by the hammer and tongs method, endeavoring to beat the disease out of the patient. Give your indicated remedies if remedies are indicated, but if any physician can say that he can take 100 cases of acne and can find the indicated remedy in fifty of them, my experience has been that he cannot, or at least I cannot. Patients come in and there apparently is nothing the matter with them but the lesions you see on the face, but strip them. You will find on the outer portion of the arms keratosic papules, acuminate, hard, horny papules, and you will find them on the outer side of the thighs, which indicates that those people do not

wash properly. They are well dressed, as a rule, and from the collar up they are all right and from the cuff down they are fine, clean and nice, but the skin is not kept properly. That is the point I want to make. Do not hunt for your indicated remedy before you have done everything else that needs to be done, and put your patient in condition to have the indicated remedy act. There are bacilli and micrococci found in acne, but they play minor roles in its causation.

THE SPECIFIC ACTION ON THE KIDNEYS OF KALI CHLORICUM.

FREDERICK V. WOOLDRIDGE, M. D., PITTSBURGH.

Kali Chloricum or Potassium Chlorate has the chemical symbol of $K\ ClO_3$. In the U. S. Pharmacopœia no process is given for Potassium Chlorate. In the Pharmacopœia of the American Institute of Homœopathy is given the preparation of the salt. Briefly, it is prepared by conducting chlorine gas into a saturated solution of potassium hydrate.

The salt, when taken into the body, is eliminated almost entirely by the kidneys. Dr. Isambert has demonstrated that it is eliminated unchanged by the kidneys. Potassium Chlorate is an active poison, four drachms of it having caused death in the adult. Among the most marked symptoms of the pathological action of the drug is that the urine is lessened in quantity, albuminous, often of a dark reddish-brown, or black color, and containing tube-casts and the debris of blood corpuscles. The lesions found after death are those of acute gastritis and acute enteritis and acute nephritis.

Having had occasion to follow out a few cases of both parenchymatous and interstitial nephritis, over a period of three years, cases treated homœopathically with Kali Chloricum, we thought it might prove instructive to note the specific action on the kidneys of Kali Chloricum. There are but few poisoning cases on record that have taken this salt. Those few, however, show conclusively that the kidneys are immediately affected. The drug has never been proved. One very interesting case of poisoning has been reported

by Dr. A. R. Ellis. The patient, a woman, took an ounce of Potassium Chlorate, supposing it to be Rochelle Salts. In two hours she began vomiting and purging. In three days the renal symptoms began to manifest themselves, the urine being almost suppressed. What little urine was passed was almost black. The patient died on the eighth day, the urine remaining almost suppressed until death.

Guinea-pigs were selected as suitable subjects for demonstrating the action of this drug. Six healthy animals were given the salt in doses corresponding as closely as possible to the first decimal trituration. One animal was given the saturated solution hypodermically. It was given hypodermically to determine the acute poisoning action of Ka'i Chloricum. This guinea-pig, which we wi'l call No. 1, received one gram of the saturated solution injected into the peritoneal cavity every twelve hours until three doses had been given. The animal was then killed and the kidneys removed. Both kidneys showed marked venous congestion; both were of a dark reddish color, and the capsule very much stretched from the œdema of the kidney. Sections from these kidneys showed a condition of cloudy swelling. The parenchymatous elements taking the acid (eosin) rather than the basic (hæmotoxilin) stains. It was noted that the larger collecting tubules were not affected.

Guinea-pig No. 2 received one grain of the medicine dissolved in a dram of water. This was given every twenty-four hours. After two doses the animal was killed. Some renal congestion noted. Microscopical sections showed the parenchyma of the cortex much congested and somewhat granular. The sections had, to a certain extent, the appearance of cloudy swelling.

Guinea-pig No. 3. Gave this animal the first decimal trituration in small oft-repeated doses until in twenty-four hours he had taken one dram. This was continued for sixteen days. The animal was killed. The kidneys were much congested. Sections showed a thickened cortex and inflamed parenchyma.

As all the guinea-pigs given the drug bear out the results as given above, it is unnecessary to give the detail of all the animals experimented upon. It might be well to mention that the method used in the preparation of the section is briefly, first, fixation in a saturated solution of mercuric chlorid in five per cent. acetic acid, then the

tissue put in absolute alcohol and dehydrated, then it is put in chloroform to remove the alcohol, then paraffin is used for embedding.

A brief summary shows:

First, The drug produces a true nephritis, the glomeruli or Malpighian bodies and the uriniferous tubules are most susceptible to the drug. The collecting tubules are not so prone to the action of the drug. Thus, in the medullary substance, no microscopical changes of a pathological nature can be demonstrated. The changes are thus located entirely in the cortex. Second, Kali Chloricum appears to attack the active excreting cell itself. The hyaloplasm of the cell becomes cloudy and finally granular. The intracellular elements are prone to take the acid rather than the basic stains. This is a sure sign of degeneration in cellular elements belonging to the active group of tissues. Thus a parenchymatous nephritis would be the disease in which homœopathically the drug would seem to be indicated.

It is neither scientific nor is it truthful to say that since an evident nephritis is produced by Kali Chloricum in guinea-pigs that the drug is indicated in Bright's disease in the human. However, the few cases of poisoning that are recorded show that Potassium Chlorate does have a pathological action on the kidneys, and that parenchymatous nephritis results from an overdose of the medicine. We have records of enough cases of both parenchymatous and interstitial nephritis that have been cured by the use homœopathically of Ka i Chloricum, and the cases have stayed cured up to date—a period varying from two to three years.

The drug is usually given in the first decimal trituration every three hours. As soon as an improvement is noted the second decimal trituration is given. As the urine denotes a clearing of the kidneys the potency of the drug is raised. It would seem that Kali Chlorisum has a useful field and a brilliant future in the treatment of nephritis.

DISCUSSION.

Dr. T. S. Dunning: I did not clearly understand what sort of potash it was he used, chloride, chlorate, or simply a chlorinated potash. From its manner of manufacture I should consider it was

rather a chlorate of potash. I would like to understand distinctly what sort it was.

DR. WOOLDRIDGE: The American Institute tabulates the remedies as follows: Kali chloricum is potassium chlorate; kali muriaticum is potassium chloride. There is a decided difference in the two.

If you give the first decimal trituration of potassium chlorate to patients you will produce a gastritis. I know a doctor who did it. He gave it to a patient to be taken every two hours. The patient came back after about four days with vomiting, purging, and symptoms of acute gastritis. The doctor said there must be some mistake. He took it himself and got gastritis. There is a difference between kali muriaticum and kali chloricum. Kali chloricum, as given by the American Pharmacopœia, is potassium chlorate, $K\,ClO_3$. The drug that was given in this case was potassium chlorate.

REPORT OF THE

SECTION OF SURGERY.

Injuries About the Wrist Joint, by J. D. Elliott, M. D.
Prostatic Abscess, by L. T. Ashcraft, M. D.
Some Observations on the Pre- and Post-Operative Treatment of Abdominal Sections, by W. D. Carter, M. D.
Tendon Transference, by W. N. Hammond, M. D.
Treatment of Venereal Ulcer and Its Complications, by W. C. Hunsicker, M. D.
Before and After Care of Cases of Abdominal Section, by D. P. Maddux, M. D.
Up-to-Date Observations on Appendicitis, by H. L. Northrop, M. D.
Biliary Lithiasis-Choledochostomy, by Desiderio Roman, M. D.
Practical Hints in Surgery, by J. H. Thompson, M. D.
Abscesses, by R. E. Tomlin, M. D.
The Radical Cure of Inguinal Hernia, by G. A. Van Lennep, M. D.
Intussusception, by C. I. Wendt, M. D.

INJURIES ABOUT THE WRIST JOINT.

JOHN DEAN ELLIOTT, M. D., PHILADELPHIA.

Injuries in and about the wrist joint are among the commonest of surgical lesions, and are usually caused by indirect violence.

From August 1st, 1904, until August 1st, 1906, 6,231 patients were treated in the Morning Department of the Hahnemann Surgical Dispensary; of these 410 were suffering with fractures. The bones about the wrist were broken as follows: Scaphoid twice; shaft of the radius low down four times; shafts of both bones low down twice; chipping off the ulnar styloid twice; fissured fracture of the lower end of the radius and fracture of the ulnar styloid once; epiphyseal separation of the lower end of the radius twice; Colles' fracture 58 times; making a total of 71 fractures in this neighborhood,—a little over 17 per cent.

The strong ligaments, the slight motion between the carpal bones, which somewhat breaks the jar of a blow, and, most important, the

tendons which surround it, all help to give great strength to the wrist joint, so that forces applied here are usually expended upon the weaker bony structures.

Various fractures occur, but by far the most important and commonest is that of Colles', which constituted 14 per cent. in our series. It is usually caused by a fall upon the outstretched hand, and takes place at the junction of the shaft and the spongy bone forming the lower end of the radius, therefore, from three-eighths to one and one-half inches above the joint. It is often transverse, but in the majority of complete fractures the line is slightly oblique, being higher on the dorsum and externally, thus coinciding with the line of union between the dense and cancellated bone.

The lesions produced in the lower fragment are not constant; in over 50 per cent. there is comminution, and not infrequently the articular surface is involved, especially posteriorly, where it comes in contact with the carpus when the hand is fully extended.

The lower fragment is carried outward and backward, and its upper end is more or less tilted toward the ulnar side, so that by inspection we find a marked prominence or hump on the dorsum, a corresponding defect underneath, and just above this the projection of the end of the shaft, producing the well-known silver-fork deformity. The articular surface points downward, backward and outward, instead of downward, forward and inward as it does normally.

When the lower fragment is everted the hand goes with it, giving one of the most important and probably the most constant symptom of a Colles', i. e., the carrying of the hand to the radial side. This is not abduction of the hand, as it is often described, for the changed position begins at the seat of fracture and no voluntary motion at the wrist joint can simulate it. This point should be borne in mind when comparing the injured limb with the sound one. This eversion can only take place when the ligaments, especially the internal lateral, the interosseus, and, perhaps, the triangular fibro-cartilage, are stretched or torn; and this will cause widening of the joint and the ulnar styloid to stand out prominently.

When the cross strain is slight or absent, the shaft is driven directly into and impacted in the cancellous bone. The displacement, which depends upon the direction of the force, varies greatly, or may be so small in amount that it cannot be recognized through the

swollen soft tissues. In nearly all of these cases there is crushing and comminution, and, although eversion is present, a fragment may be driven against the ulna, and this will tend to decrease motion between the bones, especially if the sigmoid cavity is involved.

By palpation the radial styloid may be found to be on the same level, or even higher, than that of the ulna. This occurs in about 50 per cent. of the cases, but it may be absent with marked deformity in impacted fractures. When palpating the ulnar styloid the hand should be midway between pronation and supination, for in this position the styloid will be directly under the examining finger, and if it is broken off this can be made out.

With impaction a bunching at the lower end of the radius is felt, and this may be the only symptom pointing to a fracture. If slight it is often difficult to recognize, as the normal expansion and roughness of the bone and the swelling are misleading. Comparison with the other wrist will aid in making a decision, and by sliding the examining fingers from the edge along the anterior surface of the radius the soft parts can be pushed away and any deformity distinctly felt.

Although abnormal mobility and crepitus are pathognomonic symptoms, they should not be sought. To elicit them means severe pain to the patient, and in doubtful cases, either on account of the swelling or because the bones are impacted, they can not be made out.

Such an examination will in the vast majority of cases demonstrate a fracture, but the rule insisted on by Van Lennep is the safe one: "In every case of a fall upon the outstretched hand, a radiograph should be taken, or the patient should be anæsthetized and an attempt made to break up an impaction." If this were always done we would meet with less deformed and useless hands. And certainly no damage can follow the manipulations necessary to reduce a fracture if the bone is intact.

Fracture of the styloid process of the ulna occurred in 40 per cent. of our cases, a smaller percentage than usually stated. It is most frequent in young patients, in whom it takes the form of an epiphyseal separation. The displacement was slight in many cases, but in others the process was completely separated from its attachment. The same manipulations required to reduce the fracture of the radius will reduce this one, and fibrous union, at least,

with no bad after effects can be confidently anticipated. If the displacement is not overcome, pain when using the hand persists over a long period.

When the injury has been severe, effusion into and around the tendon sheaths is extensive. As a result, and it is not an uncommon result, a plastic thecitis with ankylosis of the fingers, giving a practically useless hand, follows. Other, but rarer, complications are compound fractures, fractures of the shaft of the ulna, of the styloid process of the radius or the carpal scaphoid, and dislocation of the lower end of the ulna. Moore first described the last and evolved a special technique to overcome it. Hamilton agreed with him that it is of common occurrence, but the X-Rays have failed to show this to be a fact.

The prognosis depends upon many factors. Age must always be considered. Though many elderly patients recover completely, a guarded prognosis is always advisable. Severe crushing and comminution, with the resultant loss of substance, makes a good anatomic result impossible. The deformity can not be overcome, eversion of the hand and prominence of the styloid process remain, all functions of the joint are impaired, and even the power of pronation and supination may be completely lost. The dangers of effusion into the soft parts have already been referred to. If the fracture enters the joint a correspondingly poor prognosis should be given.

The sine qua non of success in treating a Colles' fracture is complete reduction and perfect apposition of the fragments. This applies to all cases. Every student who passes through Hahnemann College learns that one impacted fracture, and only one, should always be broken up. And this is a Colles'. I have failed to find this maxim elsewhere, and for that reason wish to lay particular stress upon it. A perfect result may not follow, but certainly the patient will have a more useful and a better looking arm than if it is left alone. This is best accomplished by grasping the lower end of the radius in one hand and making forced flexion and extension, while the shaft is held firmly with the other. With the forearm flexed and the hand carried to the ulnar side, the fragments can be forced into position. As these manipulations are exceedingly painful, and considerable force must be used to break up an impaction, a general anaesthetic is always of value. Nitrous

oxide gas or a few whiffs of ether are enough, for there is little muscular action to overcome and loss of sensation is all that is required.

There are three requisities in a proper splint for this fracture: (1) The hand should be carried to the ulnar side; (2) The hand should be flexed to preserve the arch of the radius; and (3) The splint must be short enough to allow free motion of the fingers. No special pads to hold the bones in position should be used, on account of the danger of gangrene from pressure, which is always to be feared in fractures of the forearm when two splints are applied. They are particularly contraindicated with much swelling, and it is in these cases that retention is most difficult.

The perforated Levis metal splint will answer the requirements very well, but an even better dressing is one of plaster of Paris used at Hahnemann,* which consists of a palmar splint beginning a little below the elbow and ending at the metacarpo-phalangeal articulations. It can be made of any desired length or thickness by folding the wet bandage forward and backward, and should reach from one styloid process to the other. The hand is held in the proper position and the fragments coapted while the plaster is hardening. It is light, not so cumbersome as a metal or wooden splint, is always to be obtained, and has the great advantage that it can be adapted to the peculiarities of each individual case. With severe traumatism, antiphlogistics should be freely used to reduce the inflammation and absorb the exudates.

Union is pretty firm within two weeks, when gentle passive motion should be instituted, and the splint can be discarded at the end of four weeks. The fibrous tissues do not heal so quickly as the bony, and a leather wristlet should be worn for six months. If this precaution is not taken, the joint gradually widens, the hand is carried to the radical side, and the styloid process of the ulna becomes prominent. Hot and cold douches, passive motion, and massage are useful adjuvants in securing a strong and useful wrist, and the patient should be encouraged to perform some light work.

In old fractures an impaction may sometimes be broken up as late as five weeks, but after that, on account of the small size of the lower fragments, such a proceeding will be impossible. For the

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*Van Lennep, *Hahnemannian Monthly*. February,, 1897.

same reason osteo-clasis, even if successful, will cause too much destruction of the soft tissues, nor will it restore the length of the radius.

In complete fractures, when the deformity has not been overcome, osteotomy has been recommended, and has been successfully accomplished several times.

With loss of pronation and supination, resection of the lower end of the radius has given fair results, and is worthy of a trial in properly selected cases. If a misplaced ulnar styloid gives rise to much pain and disability, it should be removed.

An inverted Colles' fracture, in which the lower fragment is driven toward the palmar surface instead of the dorsal, may be rarely met. It is generally ascribed to a fall upon the flexed hand, and the direction of the force is opposite to that usually applied. The fracture is a complete one, and can be diagnosed by the same symptoms as a Colles' allowance being made for the reversed displacement. The lower fragment is partly hidden by the flexor tendons, in which it is buried, but the upper fragment forms a sharp ridge on the dorsum. The hand is everted and the ulna prominent posteriorly. The same rules should be followed in the treatment as have been outlined for Colles' fracture.

Ephiphyseal separation of the lower end of the radius occurs more frequently than supposed, the usual diagnosis being Colles'. It is to be suspected in a patient who is under twenty years of age. Pain and tenderness are felt along the epiphyseal line, which is lower than the line of fracture. There is usually no lateral displacement, the line of separation is transverse, crepitus is soft, reduction is easily accomplished, and there is little tendency to recurrence of the deformity. In older patients a layer of the bone from the dorsum is usually torn away with the epiphysis. The prognosis is good, the growth of the radius being rarely affected, although several such cases have been reported. The treatment is the same as for Colles'. Separation of the lower epiphyses of both the ulna and radius presents much greater difficulties in the treatment than does separation of the radial epiphysis alone. It is often impossible to get them accurately replaced, so healing occurs with some deformity, and this increases the chances of arrest of growth.

Fractures of the lower end of the shaft of the radius, or of both bones, may so closely simulate a Colles' fracture that a diagnosis

can only be made by a radiograph, or when the patient is anæsthetized. The displacement is usually the same, although in one of our cases the lower fragments of both bones were carried to the ulnar side, causing inversion of the hand. The usual cause is a fall upon the outstretched hand. We had such a case last winter in a boy who had been treated by us within a year for double Colles' fracture received in the same manner.

The treatment is the same as for a Colles', but reduction is often exceedingly difficult, and if the fracture is several inches above the joint care must be taken to prevent the formation of interosseous callus or angulation between the fragments. Fractures of lower end of the shaft of the ulna are rare, and are diagnosed by localized pain and palpation of the bone. Displacement, as a rule, is slight, and the treatment consists of immobilization on a straight splint.

If more radiographs were taken in injuries about the wrist joint probably fracture of the ulnar styloid alone would not be considered such an uncommon lesion. . We have treated two cases, both of which had been overlooked in other hospitals, but a careful examination made us suspect it in one case, and in the second a clinical diagnosis was possible. In the latter it was caused by direct violence, pain and localized tenderness were complained of, a depression was felt at the site of the process, and the diagnosis was clinched by feeling the rough bone. Radiographs showed marked displacement in each case, which was overcome by carrying the hand to the ulnar side. One patient never returned for treatment, but in the other the result was good.

The radial styloid may be chipped off separately, though it is more commonly a complication of a Colles' fracture. There is usually little displacement, as in our cases, but it may be drawn up by muscular action. A diagnosis without an X-ray examination is difficult. Reduction is easily accomplished, and the after-treatment consists of immobilization. Fissured fractures of the radius have been described since the X-rays have made their diagnosis possible. Immobilization with early passive motion is all that is required. The joint having been entered the after-treatment may be tedious, but the ultimate results are usually good.

Dislocation of the wrist is extremely rare, and is usually associated with a fracture of the rim of the articular surface of the radius about one-half an inch above the joint. This is a Barton's fracture,

and may be anterior or posterior, although almost invariably the latter. The etiology of a dislocation is the same as that of a Colles' fracture, from which it can be differentiated by locating the two styloids anterior to and below the hump, by feeling the clean cut, rounded surfaces of the carpal bones, and the deformity disappearing with a snap. Reduction is easily accomplished by direct extension, with, perhaps, some abduction and supination. This has been successfuly performed as late as sixty days after the injury. Crepitus may be felt with a Barton's fratcure, and recurrence of the deformity is more likely. Every effort should be put forth to reduce the amount of inflammation and prevent ankylosis of the wrist, which is the greatest danger.

One of the rarest of lesions is an uncomplicated dislocation of the lower end of the ulna. Following the general rule of injuries in this neighborhood, the backward dislocation is the more frequent. A diagnosis can be made from the narrowing of the wrist joint, from a depression where the ulna should be found, and by locating it on the anterior or posterior surfaces of the forearm. In recent injuries reduction is usually easily accomplished by keeping the radius firm and pushing the ulna forcibly towards its socket. Some cases demand also extension and counter extension. The bone generally remains in place without assistance, but in several cases there was a strong tendency to spontaneous dislocation. G. A. Van Lennep has reported a case of forward dislocation combined with a fracture of the styloid process. The disloctaion could be reduced, but it was impossible to retain the bone in its normal position. Resection of the lower end of the ulna was finally resorted to, and a good functional result obtained.

Fractures of any of the carpal bones are possible, but the one most frequently affected is the scaphoid. It has long been known as a complication of Colles' fracture, but the importance of a simple fracture of the scaphoid has not been properly recognized. It is not a very rare condition, but like so many of these injuries, it has usually been treated as a sprain with resulting pain and loss of function. Four cases have been X-rayed in Hahnemann Hospital within the last six months, two of which belonged to our deaprtment.

One patient had been treated with massage, passive motion, etc., for about five weeks with no improvement. His wrist was im-

mobilized, but he discontinued treatment after two weeks. A diagnosis was only made with the X-rays. The other was a recent injury, and a tentative diagnosis made from the symptoms was afterwards confirmed by a radiograph. He had pain, swelling, loss of motion, particularly extension, but the swelling was greatest in the radial side of the joint, and the tenderness was localized to the scaphoid bone. His hand was put upon a Levis splint, and kept there for four weeks, when active and passive motion was begun. The result was satisfactory. Codman and Chase advise the excision of the proximal fragment if troublesome symptoms persist after eight weeks, believing that no harm will result, and that in the majority of cases non-union and pain from pressure upon the nerves or from motion will follow. Certainly this is a more frequent injury than is generally supposed, and should be carefully hunted for.

Anterior dislocation of the semi-lunar bone may complicate the scaphoid fracture, or may be the only lesion. It can be diagnosed clinically by a silver fork deformity, the posterior prominence of which corresponds with the head of the os magnum, and between which and the lower end of the radius is found a groove representing the position formerly occupied by the now dislocated semi-lunar, and a tumor under the flexor tendons of the wrist just anterior to the lower end of the radius. Recent dislocations can be reduced by forced extension and flexion, while an assistant makes firm pressure on the semi-lunar bone. If reduction is impossible, and the presence of the bone gives rise to discomfort, its removal is indicated.

DISCUSSION.

Dr. W. B. Van Lennep: I am very glad to hear this paper from the standpoint of one of the staff of the Hahnemann Hospital, because it represents, as I probably know better than most of you, a great deal of excellent scientiific work which is being done, not only in the line of injuries about the wrist joint, but in all hospital cases, in all ambulance cases, and I want particularly to compliment Dr. Elliott and his colleagues on the very good scientific work which they have been doing in the out-patient department. Another point that interests me in the paper is the fact that they have

developed by the constant use of the X-rays and radiography a great number of lesions that may be found at the wrist joints, lesions which most of us could not appreciate before we had the benefit of radiography. When we look at these fractures as they are depicted either by the fluoroscope or the radiograph, it seems quite easy to make a diagnosis, but what probably would appeal to the general practitioner is the fact that he has not at hand an X-ray machine or facilities for developing these pictures that help us in accurate scientific detail. What is he to do in order to get good results? That is really one of my objects in making a few remarks in connection with this paper. We can all realize the difficulty in diagnosing so-called Colles' fractures. When we recall that from time immemorial these injuries were looked upon as dislocations of the wrist joint, and when Colles by dissection first brought out the description of fracture, and said it was a fracture, he met with all kinds of opposition, and for quite a while, on account of the opposition or mistrust, his ideas were dropped, and, if I remember right, it was not until after he had died that those studies were brought up again, and his statements were verified, and the fracture was called after the man who discovered it. If, therefore, the difficulties are so great, how are you, as general practitioners, to recognize such injuries? For a number of years we had in the Hahnemann Hospital, and also in our teaching in the college, what I believe to be very good working rules, and I might enumerate them as follows: Given anybody who has fallen upon the hand and who has an injury to the wrist joint, the first thing we must think of is a fracture, and the last thing we must think of is a dislocation. If we have a fracture it is either a complete fracture or it is these very common impacted fractures. There are two rules that absolutely apply to those two fractures. If you will correctly and accurately reduce a complete fracture of the lower end of the radius, for practical purpose it needs no treatment. So much is this the case that I think it was Dr. John B. Roberts, of this city, who advocated some years ago very energetically the simple application of the circular bandage or strip of adhesive plaster around the wrist. Others said do nothing else than put the hand in a sling, the sling coming underneath the wrist, and let the hand hang down towards the ulnar side. An important point, therefore, in the treatment of complete fracture is complete and accurate reduction. It is

even more important in impacted fracture. Ninety-nine out of one hundred of these cases have been treated as sprain. The important point in connection with an impacted fracture is first to make it a complete fracture and then accurately set it. What should be the working rule for the general practitioner? Given an injury to the wrist, preferably one that has been produced by one falling upon the outstretched hand, give the patient an anæsthetic, and try to produce a fracture. If there is no fracture there you cannot break the lower end of the radius with your fingers. If there is a complete fracture you will feel abnormal mobility, no matter how great the swelling is, and you will feel crepitus. If you do not it is an impaction. You must break up that impaction and lengthen the radius, which has been shortened until the hand has been thrown into this position. You must produce a complete fracture. Make an accurate apposition and you will get a good result. Therefore, to sum up, all injuries at the lower end of the radius, preferably from falling on the outstretched hand, should be treated as fractures. All fractures should be treated as if they were impacted; if you have not a fracture you cannot break it; if you have an impaction you can break it; if you have a complete fracture you can feel it; if you have accurate setting it will give a good result, no matter what dressing you put on.

The next point I will make for the general practitioner is the more general use of the homemade splint. I can very honestly say my admiration has been aroused many times to see the ingenuity of the country doctor, who will make all manner of splints out of a cigar box or a little piece of board. If this same doctor will use the same amount of ingenuity with a bandage of plaster of Paris, which he can always have at hand, he will frequently have a much more comfortable and useful splint. There is nothing more true than what has been said about the plaster of Paris splint. Running it forward and back, eight, ten or fifteen thicknesses you have a splint which will support any arm or any leg, and there is no limit to the possibilities of the plaster of Paris bandage. I will urge, therefore, upon the general practitioner to make use of his ingenuity in applying the plaster of Paris dressing.

You may take a patient with a fracture of the lower end of the wrist through five or six weeks of treatment, get an absolutely perfect result, discharge the patient, and he will come back to you in

two or three months with about as ugly a deformity as the original fracture. Why is that? Because fibrous structures do not unite as quickly as bony. We have laceration of the ligament between the two bones, and probably of the lateral ligament, and when the hand is allowed to go free it gradually falls to the radial side by separation of the two bones. Therefore, when you are through with the union of your fracture start holding the ligament. This is done admirably by a little leather bandage or a little leather bracelet which holds the two bones together five or six months. Never let a fracture of the lower end of the radius go out of observation for six months.

PROSTATIC ABSCESS; REPORT OF CASES. ITS INFLUENCE ON HYPERTROPHY OF THE PROSTATE. IT IS NOT ADVISABLE TO ENUCLEATE THE PROSTATE WHEN THE SEAT OF A CHRONIC SUPPURATIVE PROCESS.

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The formation of pus within the capsule of the prostate in sufficient quantities to produce marked constitutional symptoms, as well as to cause the destruction of important structures is, I believe, comparatively infrequent. As proof of this statement, Taylor in "Genito-Urinary and Venereal Diseases," third edition, says: "In some rare cases of acute gonorrhœal congestion of the prostate the inflammatory process becomes so severe that an abscess is formed." My experience at the Hahnemann clinic, where the number of patients who apply for treatment is large, substantiates this statement. This, too, has been found to be true at the West Philadelphia clinic as well as in my private practice. In fact, I will go further, and say that comparatively rarely have I seen prostatic abscess in public practice. Parenthetically, I may say that proper differentiation must be made between acute and chronic prostatic congestion, and chronic suppuration where the expressed morbid material from the prostatic shows pus and occasionally pathogenic bacteria, particularly gonococci. If these are to be considered, then abscess of the prostate is

extremely frequent, since according to Wossidlo, "Valentine's Irrigation Treatment of Gonorrhœa," as well as others who see much of this work, ninety per cent. of all gonorrhœics have, or have had, prostatic complications. Again, the majority of cases of prostatic abscess personally seen have been in either my private practice, or observed in consultation with others. This I attribute to these facts: First, in public patients with acute urethral and bladder infection are seen usually early; second, because of the superior skill possessed by those accustomed to do any special work, the proper management of these cases prevents complications; third, in private practice advice is not sought for reason of false pride, economy, or until the condition is too apparent; fourth, the consultant, as a rule, sees the complicating phases of the diseased conditions.

Prostatic abscess arises most frequently from either acute or chronic gonorrhœal posterior urethritis, the morbid material entering directly the substance of the organ. Alexander (Prostatic and Peri-Prostatic Abscess, Annals of Surgery, December, 1905) claims that the condition arises as a result of the irrigation treatment of gonorrhœa. Quoting him verbatim, he says: "The non-bacterial factors are as important, etiologically, as are the essential agents of infection. Among these the most active in causing prostatic abscess is the modern treatment of gonorrhœa by irrigation of the urethra from the external meatus." With proper regard for his opinion it is but fair to mention that the statement is true in this respect only. Rough and clumsy treatment of a canal, whether acutely inflamed or not, either by irrigation, injection or any instrumental treatment whatsoever, will unquestionably serve to cause prostatic suppuration, but in common with my confreres, as well as most genito-urinary men of experience, not only here but in foreign clinics, the irrigation treatment of any form of gonorrhœal urethritis is regarded as a prophylactic against prostatic abscess, because it destroys the active agent of the disease, thereby reducing suppuration. Its omission may hasten suppuration. Cases 1-10.

Traumatism, either from the passage of a sound (case 7), or from direct injury to the prostate (case 11), occasionally causes suppuration, even in those who have never been previously infected. Sexual excitement and exposure to cold by favoring congestion, may, in those who have been previously infected, excite suppuration. Foreign bodies within the prostate or bladder (case 14) have

been responsible. Likewise hypertrophy of the prostate with consequent catheterization (cases 4-13) may excite it, as well as urethral stricture (cases 2-3).

Genital tuberculosis frequently produces it (case 8), and Lydston (Genito-Urinary and Sexual Diseases, second edition) claims that the condition may arise from general pyogenic infection, and that it may be caused by such infective diseases as variola and mumps. Such, however, I have yet to see. It will then be seen that prostatic abscess may arise either from traumatism or from bacterial agents, notably the gonococci or tubercle bacilli. The pus finds its way from the prostatic urethra by means of the excretory ducts (rarely the pus is limited to a single duct) into the substance of the prostate, affecting one or more of the lobules of the prostate, the number being determined by the number of excretory ducts involved, since each duct drains a single lobule of the prostate. As a result, these ducts become occluded and pus forms; thus we may have one or more circumscribed abscesses, or abscesses affecting several parts of the prostate, disseminated abscesses varying in size from a pea to one containing a half cupful of pus. These may rupture and unite to form one large abscess cavity, which may cause great destruction of tissue. Lydston (Genito-Urinary, Venereal and Sexual Diseases, second edition) cites a case of Guyon where the entire glandular tissue was destroyed.

The course of pus within the prostate depends largely upon the extent of tissue involved. When one or more follicles are infected resolution may occur. When, however, several are involved they may coalesce, break down, and form a large abscess, which, unless treated surgically, becomes the sole reason for the continuance of a chronic urethral discharge, the posterior urethra being constantly reinfected by ducts discharging their contents within the canal. Occasionally these minute abscesses rupture and discharge into the urethra (cases 5, 6 and 7), or are ruptured during rectal (case 9) or urethral (case 13) manipulation, or pus may exude through the capsule and form a periprostatic abscess (case 8), or be complicated by suppurative Cowperitis and perineal abscess (case 2), or it may burrow into the ischio-rectal fossa, the bladder, or the rectum, leaving one of more intractable fistulæ (case 3), or it may burrow more extensively into any of the surrounding tissues.

The presence of pus within the prostate is usually attended by

well-defined symptoms. Rarely its presence escapes notice. In its mildest expression where pus has entered into one or more ducts of the prostate and confined itself to a limited area, the symptoms appear slowly, and are but a slight exaggeration of those associated with acute urethritis; here the patient may not be compelled to go to bed. The symptoms, however, increase in severity according to the extent of tissue affected.

In the gonorrhœal type the urethral discharge is either markedly diminished or entirely suppressed. Urination is unduly frequent and painful, sometimes even agonizing, owing to the contact of the urine with the highly infected mucosa. The urine is always cloudy, and may be tinged with blood, caused by rupture of the smaller capillaries. Cysto-spasms exist. The increasing size of the abscess may cause either partial or complete urine retention (case 4). The rectal symptoms vary from the sensation of a lump to pain of a throbbing, boring character. Pain is likewice felt in the perineum, and radiates to the scrotum, supra-pubic region and the thighs. Hæmorrhoids and irritation of the sphincter ani exist, caused by the swollen and congested prostate impinging upon the rectal lumen. There is frequent urging to defecate, very acute pain accompanying the passage of stools. These may, by reason of passing the constricted rectal lumen, become flattened out and ribbon shaped. Except in very unusual instances, a man suffering from a prostatic abscess of any extent is found in bed with his thighs flexed and suffering the torments of the damned. Rectal examination will reveal an intensely engorged sphincter and a bulging tumor, showing usually areas of fluctuation and congestion. The temperature may run up as high as 104 2-5°, the pulse beat to 120 (as in case 2 and 3.) The symptoms assuming an alarming type, true pyæmia may be the result of localized suppuration unless the abscess be emptied either by nature or through the intervention of art.

A well-defined abscess of the prostate is not often mistaken for any other condition (although rarely very few symptoms may exist to throw light on the subject, even when abscess is present, especially when but one or two follicles are involved). It may be mistaken for cystitis, but the urine is the guide, since in prostatic abscess it is cloudy, pus shreds preceding rupture, becoming full of pus only after this occurs. In advanced cystitis this is not the case. Rectal examination, too, shows areas of tenderness. Where, how-

ever, a previous cystitis has existed the symptoms of such will be intensified, and for a while may obscure the diagnosis; the two, however, do frequently co-exist. Prostatic abscess may, too, be confused with hypertrophy, but prostatic abscess, as a rule, occurs in young men having a recent history of urethral infection. Again, the bogginess of prostatic abscess is rarely ever present even in very soft and large prostates. However, prostatic abscess may be engrafted on hypertrophy of the prostate, resulting either from infection or trauma (cases 4, 13, 14). The abscess formation here, if extensive, will result in destruction of tissue and subsequent cicatrization. Swellings in the perineal region due to involvement of the glands of Cowper, especially if bilateral, may be mistaken for prostatic abscess, but the tumor is well-rounded and is situated half way between the scrotum and the anus; again, there is no tumor on rectal palpation. However, in some cases (case 3) Cowperitis and prostatic abscess may co-exist. In peri-prostatic abscess the condition may be mistaken for ischio-rectal abscess, but the location of the tumor being usually by the side of the anus, as well as the hardness and tumefaction situated above the prostate, makes the diagnosis apparent. Prostatic and ischio-rectal abscess may co-exist. Retention of urine due to prostatic abscess may cause some to think of urethral stricture, but in the latter, the obstruction would not be beyond 6½ inches from the meatus. It may, however, complicate prostatic abscess (case 2).

The prognosis depends upon recognition, then prompt evacuation. Fortunately many rupture spontaneously into the urethra and cause no further trouble. Otherwise one of the following conditions may follow: The abscess may break and cause rectal or perineal fistulæ, and because of their slowness to respond to treatment, make the patient uncomfortable for life; or, it may rupture into the peritoneum with fatal results; or, it may break per urethram, drain insufficiently, thereby causing chronic suppurative prostatitis and gonorrhœal reinfection; or, repeated abscess formation; or, through the medium of the ejaculatory ducts cause chronic inflammation of the seminal vesicles, thus constituting what Bellfield terms "Pus tubes in the male." In the light of recent bacterial investigation chronic suppurative prostatitis may, too, be the cause of "genital tuberculosis." Again, if unrecognized, prostatic abscess, by pyæmia, may be the direct cause of death.

TREATMENT.

Tubercular prostatic abscess is incurable. There is but one gleam of sunshine associated with prostatic abscess and this is by extensive destruction of tissue. It may reduce an already enlarged gland or prevent one from being so. The only treatment for prostatic abscess is evacuationn and drainage (through a median perineal incision) the moment pus is suspected or constitutoinal symptoms present. Afterwards the symptoms usually entirely disappear. Incision is sometimes permissible through the rectum, but only when the tumor is so soft that it bulges almost into the anal orifice, and is on the point of breaking down. Rectal incisions are dangerous because they invite fistula. Any attempt to rupture either by massage per rectum or by the introduction of a sound must be prohibited, since such may cause insufficient drainage and reinfection. The technic is in the main that employed for perineal cystotomy. After the customary operating toilet, the patient should be anæsthetized and placed in the lithotomy position. A grooved staff is passed into the bladder, or as far as the obstruction, provided such prevents an instrument from entering the bladder, and held there by an assistant, the patient's legs being likewise supported by assistants. The operator then makes an incision through the skin and deeper structures about three-fourths of an inch long, commencing about two inches above the anal margin. Care should be taken to make this incision exactly in the median line thus avoiding wounding adjacent tissues. Some prefer a curved perirectal incision or other special incisions for reaching the prostate, but the method herein advised is preferable, as will be seen by reading a description of its merits. The urethra is usually readily located, and when seen should be incised sufficiently to admit the second finger. The next step consists in over-stretching the sphincter and neck of the bladder. This may be done by inserting the fore-finger within the wound and sweeping it around within the neck of the bladder, making firm pressure upon all of the parts. Incidentally, this may rupture the abscess, but if ineffectual, an incision may be made and the cavity thoroughly explored by the finger. After this the sphincter ani should be divulsed (since there is usually an associated congestion of the anal sphincter, which is usually immediately relieved thereby), and the prostate gently massaged per rectum, with a view of

evacuating the pus. Additional incisions may have to be made for abscess opening, either into the ischio-rectal fossa or involving the perineum. Ordinarily, however, a median incision will suffice. After this the largest double drainage tube which the wound will admit is passed into the bladder, and that organ is then irrigated with a saturated solution of boracic acid until the fluid returns clear, when the wound is packed with sterile gauze and the patient returned to bed. Recovery may be hastened by daily irrigating with a saturated solution of boracic acid. The tube should not be removed except to free from clots or because of rise of temperature, chill or cysto spasms, until the fifth day. A sound may be passed usually a week following the operation. Following this operative procedure recovery is very rapid, the urine clears, the cystitis, if any, disappears, and the patient is cured. The question naturally arises, is there none other than surgical treatment for prostatic abscess? We must say no. However, prostatic congestion, the first step in prostatic suppuration, may be prevented by the proper management of those conditions, primarily urethral, which give rise to it, as well as to a proper cure of these chronic suppurative conditions of the prostate. Fortunately, every case of prostatic congestion does not end in suppuration. Here well-directed remedial agents will often prevent suppuration; thus, when present, all local, urethral, bladder and rectal treatment must be absolutely interdicted, otherwise manipulation may hasten suppuration. Rest in bed followed by mild purgation and the administration of Aconite, Belladonna, Pulsatilla or Hepar, according to their several indications, may prevent pus formation. I cannot refrain from depicting the silver lining associated with prostatic abscess as well as suggesting the advisability of total enucleation in chronic suppuration of the organ. Taking up the first of these. When prostatic abscess is traceable to gonorrhœa, it exists, I honestly believe, barring a short illness, to the patient's distinct advantage. For these reasons, chronic gonorrhœa frequently owes its presence to chronic prostatitis, necessitating perineal drainage for its amélioration. ("Perineal Drainage for Chronic Gonorrhœas," by L. T. Ashcraft, A. M., M. D., reprinted from the Hahnemannian Monthly, November, 1903.) Now, since operation cures prostatic abscess it prevents an attack of posterior urethritis and prevents it from becoming chronic. Again, it is beneficial, since at times, destroying, as it does, some of the substance of the pros-

tate, it may prevent enormous enlargement of the prostaet or reduce an existing enlargement. In this article I have referred to removal of the prostate for chronic suppuration, and I believe that the day will come when surgeons will remove this gland (under such circumstances), thereby preventing chronic infection of the seminal vesicles, the bladder, the testes and the posterior urethra. In conclusion—

First. Prostatic abscess is infrequently seen.

Second. When present, prompt surgical interference is imperative.

Third. It may exist to exert a destructive effect on hypertrophy of the prostate or prevent enormous hypertrophy.

Fourth. Chronic suppurative prostatitis calls for prostatectomy to insure against chronic gonorrhœa of the male pelvis together with its far-reaching consequences.

Case 1.—A. C., age 22; clerk; single; patient of Dr. Adair, Wilmington, Del. Diagnosis, gonorrhœal prostatic and peri-prostatic abscess. Operation, abscess drained; recovery; unilateral epididymitis two weeks later; cured.

History.—Contracted first attack of urethritis March 1, 1906; three weeks later developed a prostatic abscess. He was treated locally for the urethritis, but while undergoing the cure exercised too violently and was seized with pain in the perineum, a sense of fullness in the rectum, supra pubic distress and frequent and painful urination. Local urethral treatment was discontinued, and the patient ordered to bed. He received Belladonna internally, and was given several sitz baths daily. I was with him three days after this attack and failed to detect any evidence of prostatic suppuration. The temperature and pulse were then a little above normal. From this time on, however, he became progressively worse, and when I I saw him two days later the temperature was 103°, pulse 124, tongue coated, marked stupor and partial urinal retention. Rectal examination disclosed softening and bulging in and around the prostate. Operation was decided upon. Accordingly he was removed to the Wilmington Homœopathic Mospital, and a median perineal incision made and a considerable quantity of pus evacuated; a double drainage tube was inserted, and the wound lightly packed with gauze. The bladder was irrigated daily with 1 to 5000 solution of silver nitrate. The drainage tube was removed on the

fourth day. The patient left the hospital after an uneventful convalescence within ten days from his admission. Two weeks later, apparently without cause, he developed a swelling of the right epididymis, which quickly subsided, however, by rest in bed, support of the scrotum, the application of Ichthyol ointment and Pulsatilla internally. A slight posterior urethritis remained for which he received weekly instillations of three grains to the ounce of nitrate of silver. He is now well. The wound healed in three weeks.

CASE 2.—J. S., 25; single; contractor; patient of Dr. Harrison, Philadelphia. Diagnosis, prostatic and peri-prostatic abscess; epididymitis; seminal vesiculitis; urethral stricture. Perineal section. Cure.

HISTORY.—Case was seen in consultation; patient had been suffering from bilateral epididymitis and discomfort while urinating for three days; had developed specific urethritis four weeks previously, for which he had treated himself locally; had several previous attacks of urethritis, and had occasionally been treated for stricture. Patient was quite ill; temperature, 104°; pulse, 120; coated tongue; constipation; pain in the right iliac fossa; partial retention of urine; very restless and stupid; rectal examination detected bulging of the prostate and a tumor above it; operation was decided upon. Accordingly he was removed to the West Philadelphia Hospital, January 10th, and a median perineal section was made, the stricture areas severed and the abscess drained. Immediately afterwards the symptoms disappeared. The treatment at the hospital was similar to that in case number one. This patient left the hospital ten days after the operation. Cured.

CASE 3.—H. H., age 35; porter; married; patient of Dr. Jackson, Atlantic City, N. J. Diagnosis, prostatic abscess; bilateral Cowperitis; perineal fistula; filiform stricture; partial retention of urine; chronic urinary toxæmia; chronic suppurative postatitis.

HISTORY.—Patient had been suffering from urinary distress for five years; had several attacks of gonorrhœa, the first at 18 years of age; had several attacks of retention of urine, also had a prostatic abscess which had ruptured into the urethra and perineum, and had since drained imperfectly. Operation was advised. He was sent to the Atlantic City Hospital, February 1, 1905. A perineal section was made; the prostate drained; the strictures cut; Cowper's glands incised and curetted. The patient made an uneventful

recovery, leaving the hospital two weeks after operation. I saw this patient a few days previous to writing this paper. He has a persistent mucoid urethral discharge and a chronic bilateral Cowperitis; the prostate is apparently all right. The urethral calibre has been fairly maintained. Some nodulation exists in the testes and cord, and the patient is decidedly anæmic. I am inclined to believe that we have here to deal with some of the lesions of genito-urinary tuberculosis. Such, indeed, might be looked for following a history of so many gonorrhœal infections.

Case 4.—Capt. S., age 86; sailor; patient of Dr. Jackson, Atlantic City. Diagnosis, abscess of the prostate, resulting from continual catheterization for the relief of urine retention due to hypertrophy of the prostate.

History.—I saw the case in consultation July 5, 1905; patient was partially uræmic; was suffering agony by reason of inability to empty bladder and because of the virulent cystitis resulting from catheter life which he had been living for several years. The wife of this patient had been taught to catheterize him with the inevitable result—infection. Rectal examination revealed an enormous hypertrophy of the prostate. It showed evidence of suppuration clearly; there was only one thing to do, evacute the abscess or let the patient die. Accordingly he was removed to the Atlantic City Hospital; a median perineal incision was made. The patient died the following day.

Case 5.—X., age 69; married; physician; patient of Dr. R. W. Martin. Diagnosis, recurrent prostatic abscess; chronic cystitis, several attacks; operation not advised; relieved by massage of the prostate and by bladder irrigation.

History.—The case was seen in consultation and referred to me for treatment. Patient had been operated on two years ago for retention of urine due to traumatic stricture. Rectal examination disclosed nodulation of the right lobe of the prostate and some areas of softening. He complained of fullness and uneasiness in the rectum and frequent and distressing urination. Catheterization withdrew a small amount of residual urine, presenting all the gross evidences of cystitis. Because of an enfeebled constitution operation was not considered. Accordingly he was treated every third day with prostatic massage and bladder irrigation of a 1 to 5000 solution of nitrate of silver. The attack slowly subsided. During

the last three years I have helped him through several similar attacks. His physicial condition is apparently improved.

CASE 6.—Grocer, age 60; patient of Dr. P. A. Tindall. Diagnosis, prostatic abscess; recurrent attack after similar one ten years previously. Rupture per urethram; recovery.

HISTORY.—Patient developed a small prostatic abscess resulting from catheterization consequent upon enlargement. After several days of acute rectal and urinary distress (operation being declined), he obtained relief by rupture per urethram.

CASE 7.—Physician; age 35. Diagnosis, abscess; urinary fever; rupture per urtheram.

HISTORY.—Patient denies venereal history. Had been in the habit of sounding himself with a view of acquiring skill in urethral manipulation. Following the last operation he was seized with a chill, high fever, fullness in rectum and urinary distress. After experiencing several days of acute distress and mild urinary fever, during which time this resourceful man treated himself, the abscess ruptured. A few days afterwards I was consulted and found the local condition normal.

CASE 8.—C. M., age 32; tailor; single; patient of Dr. R. W. Martin. Prostatic and peri-prostatic abscess; perineal fistula; tubercular peri-rectal abscess; abscess of the right testis, epididymis and cord; abscess following abdominal course of the cord, necessitating orchidectomy and resection of the cord. drainage of the abdominal abscess; death resulted one year later from acute miliary tuberculosis.

HISTORY.—Patient was referred to me by Dr. R. W. Martin. Prostatic abscess was diagnosed. He was taken to the hospital, a median perineal incision was made and the abscess and bladder drained and treated in the usual manner; the convalescence was quite tedious, the patient leaving the hospital about a month later apparently much benefited. The perineal wound failed to heal entirely, there was always a slight leakage. About six weeks afterwards marked dysuria occurred. The perineal wound gaped and a swelling appeared at the right side of the scrotum, involving the testis, epididymis and cord; operation was decided upon; acordingly I removed the testis and as much of the cord as was possible; convalescence was slow. Afterwards the patient improved and was able to come to the office for treatment. The perineal fistula re-

fused to heal. About two months subsequently he developed a tumor in the lower abdominal region. This I opened and drained. He died six months after from acute miliary tuberculosis.

CASE 9.—S. L., age 27; Hebrew; tobacco stripper; patient Hahnemann clinic. Diagnosis, prostatic abscess; rupture from digital examination; recovery.

HISTORY.—Consulted us about two years ago; gave a history of specific urethritis six months previously; had not been treated locally but had been given a mixture internally. Acute urinary and rectal distress had existed a week before we were consulted. Digital examination of the prostate, although gently made, was sufficient to rupture the membrane, which I believe would have taken place very soon, since the tumor, an enormous one, projected almost into the anal orifice. Experiencing great relief from his symptoms he declined further operative procedure.

CASE 10.—G. O., age 46; married; sexton; patient of Dr. M. Sloan. Diagnosis, prostatic abscess; operation; epididymitis one week later; urinary fever; cured.

HISTORY.—When seen the patient was suffering from partial retention of urine and marked rectal discomfort; he presented very few constitutional symptoms. Examination revealed a congested prostate but no evidences of fluctuation; had an attack of urethritis six years ago, which had left some urinary distress manifesting itself in frequency; had recently been indulging very freely in sexual intercourse, and, beside this, had contracted a cold while discharging his duties at church. There was no history of recent infection; operation was decided upon. Accordingly he was operated on February 25th at the West Philadelpiha Hospital, and a large quantity of pus evacuated from the right lobe. The sphincter ani was divulsed, a feature of all my prostatic operations. The usual after-treatment was employed, and the patient left the hospital three weeks afterwards. He is well, and has had no evidences of disease since operation. While in the hospital, however, several remarkable features occurred; immediately following operation the temperature and pulse were quite irregular, the tongue coated and the urine dark and scant; this was due, doubtless to urinary fever, or to a liberation of the pus and subsequent absorption. Five days after removing the drainage the right epididymis became swollen; this, however, subsided under appropriate treatment.

CASE 11.—M. Y., age 42; Hebrew; salesman. Diagnosis, prostatic abscess following divulsion o fthe sphincter ani for relief of anal sphincterismus and chronic prostatic congestion.

HISTORY.—Patient had long suffered from anal sphincterismus and a chronically inflamed prostate. As a preliminary measure to successful treatment of the prostatic condition divulsion of the sphincter ani was made, a treatment which must be adopted in most cases in order to secure relief from chronic prostatitis. Two days afterwards he developed an acute inflammation of the prostate which terminated rapidly in pus formation, rupturing per urethram. Evidently in this case the traumatism to the prostatic tissue hastened suppuration in an organ already diseased.

CASE 12.—M. O., age 46; Irish; laborer.

HISTORY.—This patient applied for relief of urinary retention at the Hahnemann Hospital. He gave a history of specific urethritis fifteen years ago and several attacks since; rectal symptoms were not markedly in evidence. Suspecting stricture of filiform calibre, an attempt was made to pass a catheter. No obstruction was encountered until almost within the bladder neck; attempting to pass this pus welled up from the meatus, and the diagnosis of prostatic abscess was made. The urine was withdrawn and the bladder irrigated. Further operation was declined, the patient being satisfied, as many of these cases are, by non-operative procedure.

CASE 13.—T. L., age 79; widower; retired iron merchant; patient of Dr. J. Guernsey. Diagnosis, prostatic abscess; hypertrophy of the prostate; rupture into the bladder following catheterization, bladder irrigation, internal medication; cured.

HISTORY.—Patient had been conducted through several attacks of prostatic congestion by his physician. In June of this year, however, he had a first attack of urine retention, and was seen by his physician and catheterized about twenty-four hours after its inception. This was done morning and evening for three days, after which he was brought to the hospital. I was then invited to see him. He was unable to void urine without a catheter. The prostate was congested in the middle lobe, presenting evidences of fluctuation. During the night he suffered severely from throbbing pains which suddenly ceased. Early in the morning, upon catheterization, we found the bladder contained an unusual amount of pus. Accordingly we inferred that an abscess had ruptured into the

bladder; because of his advanced age and enfeebled condition, operation was not suggested. We contented ourselves with tying in a catheter, thus affording an avenue for constant drainage and irrigation. This treatment continued for a week, the catheter being removed every other day and a new one substituted, the bladder being irrigated with a 1 to 5000 solution of nitrate of silver morning and evening by the attending nurse. At the expiration of a week the catheter was removed and voluntary urination practiced; the patient was subsequently treated with Cantharis and Arsenicum. I saw the case two weeks ago; the urine was quite clear and could be voided quite naturally. There is very little residual urine.

Case 14.—P., age 71; Irishman; laborer; patient of Dr. W. T. Maguire. Diagnosis, prostatic abscess; multiple calculi of prostate and bladder; hypertrophy of the prostate, epididimo-orchitis. Operation refused; death.

History. Had suffered from urinary distress for several years; when seen was suffering from rectal and urinary distress; partial retention of urine; high fever and irregular pulse; also presented uræmic symptoms; rectal examination showed a very large prostate and a distinct fluctuation in the right lobe; bladder manipulation detected roughness and grating of the prostatic urethra and stones in the bladder. Operation was suggested and declined. Twenty-four hours afterwards a severe attack of uræmia resulted fatally.

SOME OBSERVATIONS ON THE PRE- AND POST-OPERATIVE TREATMENT OF ABDOMINAL SECTIONS.

WOODWARD D. CARTER, M. D., PHILADELPHIA.

About a year ago my attention was called to a paper by Craig, of Boston, on the prevention of post-operative paresis by the use of atropin and the salicylate of eserine, the author basing his claim upon the fact that they are antagonistic in every respect except that both in small doses stimulate peristalsis.

In order to secure the most favorable conditions for the action of

these agents the following points are essential; an intestinal tract that contains a sufficient bolus upon which the stimulated muscular fibres can exert their expulsive efforts; the shortest possible time consumed in handling the abdominal contents to prevent or lessen shock; the introduction at the time of operation of sufficient saline solution to float the individual coils of gut and so eliminate the danger of peritoneal adhesions; the elevation of the head of the bed, the so called Fowler posture, in order to allow the gravitation of any accumulating fluids into the pelvis.

The proper administration and dosage of these two drugs is of the greatest importance. The author of this treatment advocates first in giving atropia, gr. 1-100, one hour before the operation by mouth, or gr. 1-150, hypodermically, during the anæsthesia. The eserine should be given after the peritoneum has been opened and the condition noted, the dose varying from gr. 1-60 to 1-20, the first in clean cases, the latter in septic cases.

It has been my good fortune to have observed the action of these drugs in all laparotomies during the past year in Dr. Van Lennep's private practice, and I am satisfied that we here have remedies of decided value. We have carefully gone over the records of one hundred sections before and a like number after this treatment was instituted, and although it is not possible in a paper of this nature to give you a detailed account of the results obtained in every case, the study shows that peristalsis was established more quickly in the latter and with fewer complications; in most cases gurgling having been heard in from six to twelve hours after operation. No preliminary cleansing of the bowel should be given because it has been shown by competent observers that peristalsis is more active after a meal and at rest during the night, and that, therefore, the preliminary cleansing favors paresis by removing the normal intestinal contents. Craig has shown that an undue degree of narcosis occurring during the operation by reducing the normal percentage of oxygen delays re-establishment of peristalsis, and, therefore, during the administration of the anæsthetic every precaution should be taken to prevent cyanosis by removing all accumulations of mucus or any other impediment to free breathing. Too prolonged maintenance of the Trendelenberg posture favors the production of epigastric pain and vomiting after reaction on account of pressure of the abdominal contents upon the diaphragm. This, too, has a deleterious effect

upon the respiratory efforts during the operation and slightly favors shock on account of the diminished supply of oxygen.

The post-operative care of laparotomies is perhaps of more importance to the average surgeon than the preliminary treatment. Various methods are in use by different operators all of which have their value. Some cases require all the known methods in order to get results.

Most uncomplicated cases require but little attention, an enema given perhaps eight or twelve hours after the operation bringing about peristalsis. Water should be given sparingly by the mouth as soon as the patient is able to swallow, thus lessening the intense thirst, and at the same time having a beneficial effect from the standpoint of the mental condition. Even if they should vomit they can do no more than wash out the stomach, and it teaches the patient that too much water is not good for him. As soon as gas has been passed liquids should be given sparingly, beginning with a drachm and gradually increasing the quantity every two or three hours, until six ounces is reached. This may consist of table tea. hot water, orange or lemon juice, or better still, when the patent's stomach is behaving well something that will count, the various broths or even milk with seltzer. After six ounces of liquids can be taken without causing nausea or vomiting, a diet consisting of soft foods, eggs, milk toast or boiled rice can be given. From this we pass rapidly to a diet from which vegetables are excluded, and from thence to a full diet. Occasionally you will find a patient who will not take kindly to liquids in any form, and after two or three days' trial in sheer desperation solid foods have been administered with beneficial effects, always, provided, however, that we have peristalsis. Enemas should be given daily or every other day according to the discomfort occasioned by distention. At times it is necessary to prescribe a purge. This may be citrate of magnesia, calomel, in divided doses, or one of the various laxatives.

Septic cases should be treated vigorously and according to the advance which the infection has made. The patient is put to bed in the exaggerated Fowler position, and a purge is administred consisting of castor oil, which can be repeated if vomited; or, if the vomiting should persist, 10 grains of calomel in one dose, which, because of its weight, is more likely to be retained and forcing the intestinal contents ahead of it bring about intestinal activity. In

severe cases it is our practice to give a high enema consisting of oil, glycerine and water together with turpentine as soon as the patient has reacted from the anæsthetic. This should be repeated shortly afterward if the result is unsatisfactory. Morphia can be administered hypodermically every four hours if necessary, giving the patient the desired rest and freedom from pain which is so essential to his speedy recovery. Stimulation may be called for. The agents we have found most useful are strychnia, suprarenal, hypodermoclasis, enteroclasis and infusion. There is a certain class of cases in which there is intestinal paresis in the absence of peritonitis, the flat belly case. The abdomen is retracted, there is no appreciable rise of pulse or temperature at first, but they do not respond to purge or enemata. This condition is due to an arrest of the activity of the spinal cells. In the treatment of this condition we have a remedy first suggested by Dr. Tuller, which, I believe, is original with him, and, furthermore, was used for the first time in the Hahnemann Hospital under his direction. It consists in the rapid alternation of heat and cold to the dorso-lumbar region, thereby stimulating the spinal cells. The application is made at intervals of three minutes, first by a flannel cloth wrung out of ice water, followed by cloths taken from hot water, the temperature varying from 160-180 degrees. In many cases I have observed that after a few minutes of this treatment there would be a large evacuation of the bowels.

Murphy's method for the treatment of cases of diffuse peritonitis is a novel one. In addition to the pre-operative technique already described in this paper he advises the following post operative treatment: The introduction of a drainage tube in the lowest part of the pelvis through a suprapubic opening, after which the patient is put to bed, large quantities of water are introduced into the rectum by means of a nozzle, containing three or four openings, which has been introduced into the anus to which is attached a rubber tube leading to a bag. This bag is filled with water and elevated but a few inches above the plane of the rectum, the idea being that the water shall just trickle into the rectum not much faster than absorption takes place. In this way from a pint to a quart of water should be allowed to trickle in during an hour, the process being a continuous one, and the flow so regulated that no accumulation of fluid takes place in the bowel. In other words, an attempt is made

to run the water in as fast as it is absorbed. The object of having more than one outlet in the nozzle is that in case flatus accumulates in the rectum it will pass out through one of the openings in the tube, while the others continue to discharge the water into the rectum. When it is desired to stop the flow of water the tube is disconnected from the nozzle, the latter remaining in the anus, thereby avoiding irritation to the anus by the constant removal and insertion of the nozzle, and at the same time facilitating the passage of flatus, etc.

TENDON TRANSFERENCE.

W. NELSON HAMMOND, M. D., PHILADELPHIA.

At the time that Nicoladoni first performed the operation of tendon transplantation in the Vienna clinic, it was received with enthusiasm as offering a remedy for a class of deformities arising from paralysis of certain muscles in the extremities lying in the proximity of healthy muscles capable of being transferred.

Before the necessary requirements and limitations of such a functional change were fully understood, many operations were carried through without due regard to selection, preliminary treatment or after care; as a result, many of the cases were failures and the operation was more or less abandoned, to be worked out successfully by a few conservative surgeons. The best results from this work have been obtained in distortions arising from infantile paralysis, in that class where distinct groups of muscles are paralyzed and the healthy muscles have sufficient reserve power to adequately balance the joint when some part of them is transferred.

As the macroscopical appearance has something to do with the selection of the muscles or tendons to be transplanted and the pathology of infantile paralysis is little understood, it may be well to add the results of Koch's studies of paralyzed muscles with a view to determining the prospect of their usefulness when transplanted. The muscles affected were found to be in a state of fatty degeneration of the contractile portion, varying in degree from a single fibre to the whole muscle. Where the fatty changes were found scat-

tered throughout the muscle in small areas regeneration took place; but where the whole muscle was affected there was no regeneration. The gross appearance of these muscles varied from the rosy appearance of the healthy muscles to the yellow color of those totally degenerated.

The electrical reactions are of first importance in making the examination for the purpose of determining the exact limitation of the paralysis and the condition of the healthy muscles. The reactions should be studied carefully and relied upon rather than the functional test, as frequently when the paralysis affects the muscles of the thigh and pelvis changes take place in the healthy muscles and tendons about the foot, which appear as part of the paralysis, but in reality are due to atrophy and stretching, occasionad by the malposition of the foot in consequence of the paralysis involving higher muscles. The electrical phenomena to be looked for in the selection of a suitable case for this work are the normal reaction of the healthy muscle and the reaction of degeneration. Briefly put these are: In the healthy muscle a response to the faradic, and with a mild galvanic current a quick sharp contraction of the muscle at the closing of the circuit with the negative pole, but no response when the positive is applied. In the degenerated muscle there will be no response to the faradic, a sluggish contraction from the galvanic curent to the negative pole with as good or better response to the postitive.

The aim of the operation is a recovery of the balance of the joint stable enough to maintain the corrected position without the use of a mechanical support. This can only be successful when other means are used to correct and insure the maintenance of the part without too much strain upon the transplanted tendons. Before the tendon transference is made the existing deformity must be fully rectified and the child wear a brace to hold the joint in a corrected position for about six weeks. This insures stability of the joint and makes the tendons approximate more nearly the normal condition by compensatory shortening and lengthening. In the weak, flail-like joint so often found in infantile paralysis it is often necesary to open it, denude the articulating surfaces of their cartilage and thus produce an ankylosis to afford the necessary support. The method of transplantation that gives the most satisfactory results is that of Lange; in this operation the tendon is fastened directly to the peri-

osteum or bone in the desired position. To make the attachment secure a channel may be drilled through the bone and the tendon carried through this and sutured to the periosteum on the under surface, or, as recommended by Chlumsky, split the tendon and carry one end through and tie the two ends at the inferior surface. The operation should be advised only in selected cases and performed where strict asepsis can be maintained. As the circulation is poor in these cases, the technique should be as simple as possible, and care exercised to avoid wounding the larger vessels. The tendon must be united under certain tension, the meaning of tension in this instance is that of over-correction rather than actual strain. To get the full effect of traction it is best to free the healthy tendon from the surrounding parts and carry it as directly as possible to its new position. For this reason a long skin incision is to be preferred and should be made to avoid the bony prominences as far as possible. In freeing the tendon the old sheath must be carefully dissected out, otherwise it will pull from the old position and divert a part of the tendon's power. The suture should be made with fine silk, and, when uniting one tendon to another, a plan that I have followed successfully is to split the paralyzed tendon on the side in the longitudinal direction and insert the healthy tendon obliquely, making the suture mattress fashion, beginning at the far side and ending there, tying the knot on the side rather than above or below. In one case where I fixed the knot above the patient developed a bursa over it that interfered somewhat with the good results. Where the tendon is too short to reach to the desired position it may be lengthened by strands of silk as advised by Lange, though there is some danger of this sloughing.

The after-treatment is of great importance; a plaster cast should be applied immediately after operation and retained from ten to twelve weeks, after which a light brace properly applied must be worn until all danger of a relapse is past. In the meantime, well-directed active exercise and passive motions should be practiced, as well as massage and applications of electricity, to develop the greatest usefulness of the muscles.

The end results of these procedures are well shown in a report of 164 cases and 250 operations reported by Codivilla, as follows: In 92 the results were good; in 57 the results were satisfactory as regards function; in 15 there were recurrences.

The best results were obtained in cases of the equinovarus deformity, where the tendons were transplanted directly to the bones, and satisfactory results were also obtained in the opposite distortion, where the foot was everted and the arch pronated. It is of these two deformities that I desire particularly to speak and describe several operations which have been found satisfactory. This may best be done by citing two cases with the methods used at the operations. The first was that of talipes equinovarus occurring in a boy twelve years old. The deformity was caused by infantile paralysis affecting the peronei group. He had been operated upon several times in various hospitals, but there had always been a relapse. At this operation the club-foot deformity was reduced by excising a wedge-shaped piece of bone from the astragalus with its base towards the outside of the foot, and the tendo Achilles was divided. The foot was then put in an over-corrected position and fixed by a plaster cast. The cast was worn for six weeks, after which a brace was applied and used until the structural alterations in the bones were repaired and the healthy muscles had regained their tone, a period of about six weeks. The tendon transference was then made, as follows: The long extensor tendon of the great toe was divided, and after making a second incision extending over the cuboid, the proximal end was carried under the skin and put through a channel in the cuboid bone and fastened to its under surface. The foot was held in an over-corrected position, while the tendon was sutured and a plaster cast applied. A light brace was used for several weeks and the necessary means for the development of the muscles were employed. The transference in this case could have been made to the peronei tendons, but a firmer support and better position were obtained by suturing directly to the cuboid. In the correction of the equinovarus deformity the time-honored method of lengthening the tendo Achilles by tenotomy was followed, but where the equinus element is not marked I believe a better opration to be a division of the heads of the gastrocnemius; this will lengthen the muscle and obviate the unsightly bunching of the calf muscles that frequently occurs after severing the tendon.

Case No. 2 was a boy, aged seven, who had infantile paralysis affecting the tibial group; the foot was everted, the toes extended and the arch pronated. The preliminary correction of the deformity was first made, and followed by a tendon to tendon transference. The

tendon of the well-developed extensor proprius hallucis was divided and the proximal end sutured to the tibialis anticus; close to its insertion the distal end was sutured to the inner tendon of the extensor longus digitorum muscle. Whilst I took the precaution in this case to unite the distal end of the divided tendon with the others of the toes, it is not absolutely essential as the extensor brevis digitorum soon overcomes any dropping of the great toe that may occur. The valgus deformity is the weakest position the foot may assume, and it is often necessary to stiffen the joint by a preliminary arthrodium and attach the tendon directly to the scaphoid to obtain the desired correction.

In summnig up the treatment too much stress cannot be laid upon the necessity of preliminary work, thorough after care, and the study of each case with the view of determining the reserve power of the healthy muscles and where the attachment may be made to secure the best balance of the joint.

DISCUSSION.

Dr. H. L. Northrop: For several reasons I feel that this subject has not received the attention that it deserves. No matter what is to follow, it is one of the most important papers on the surgical program to-day. It is one of the most interesting questions of the hour, this question of tendon and muscle transplanting and nerve addition and transplanting. It is a subject which will undoubtedly become in the near future one of the burning subjects of the day. I am not ready to say anything definite further on such a subject, but I have already had two cases along this line, and in the very near future expect to operate upon one of the saddest I have ever seen, a young man who is from his hips upwards one of the finest specimens of development we could find anywhere, and yet his lower extremities are shriveled and crippled, and he hobbles around on his buttocks in a most pitiful style. I hope to be able to do something for that poor boy and believe that I can. The day is coming when we will see fewer of these very sad cripples on the street than we see to-day. Surgeons certainly ought not to rest satisfied until they can do something for these pitiful cases.

TREATMENT OF VENEREAL ULCER AND ITS COMPLICATIONS.

WILLIAM C. HUNSICKER, M. D., PHILADELPHIA.

The subject matter of this paper refers entirely to the treatment of the conditions as seen in the male. The variations from that required in the female, while in principle the same, are sufficiently marked to make it a separate study.

Chancroid with its complications, except in hospitals or dispensaries, is so rarely met with in practice, that its diagnosis and proper treatment are troublesome to the average physician.

The diagnosis increases in difficulty in ratio to experience; or as it had better be stated, the more experienced the more cautious we are in making the diagnosis.

The importance of caution in deciding upon the character of genital lesions cannot be too forcibly impressed, not only because of the possibility of an error as to their type, even if single, but also owing to the frequency of a mixed infection, if multiple.

Until three years ago the routine treatment of chancroidal lesions, in the Genito-Urinary Department of the Hahnemann Dispensary, was thorough cauterization; and the students were so taught in their sub-clinics.

By thorough cauterization was understood the application, to the sore or sores, of an agent that would destroy all diseased tissue, and cause it to quickly slough.

The agents used to accomplish this cauterization were crude carbolic acid (for its cauterizing as well as anæsthetizing powers), followed by fuming nitric acid, or the actual cautery, which burned to, and partially included, the surrounding and underlying healthy tissue. The value of this treatment depended on thorough burning.

The eschar was dressed with a stimulating dusting powder, or an antiseptic wet dressing, according to the amount of inflammation. After the eschar was thrown off, the wound was treated as any clean wound. This method, ideal for the chancroidal ulcer itself, was abandoned, because of the severe and frequent complications following its application. The superficial cauterants (nitrate of sil-

ver, copper-sulphate, &c.), are of no value, and only increase the inflammatory condition present.

Chancre must not be irritated; and as has been before stated, the early diagnosis of genital lesions is often difficult, consequently the burning of doubtful lesions should never be resorted to.

Phimosis often followed cauterization where preputial redundancy was present, due to the intense inflammation immediately following the burning. The chief cause, however, for abandoning this method, was the large percentage of suppurative inguinal bubo following its use. This complication was so frequent that the Genito-Urinary Staff of Hahnemann considered it resulted in 80 per cent. of cases. This was caused by the severe irritation of the terminal lymphatics.

The treatment now followed, while slower in action on the sore, gives much better general results. No irritation; consequently no inflammation is induced, and complications are reduced to a minimum, suppurative inguinal bubo rarely developing. Sores of the glans penis, sulcus or preputial sac, where moisture and heat are present, require a dry, stimulating and absorbing dressing. The Ulcer is wiped with dry plain gauze, a stimulating dusting powder applied, and covered with a small piece of gauze, and the prepuce drawn forward. The patient is instructed to change this dressing several times daily, and is cautioned to guard against paraphimosis. Iodoform, one part to nine parts boric acid, is the powder of choice; but a majority of patients object to its tell-tale odor. Hence, compound stearate of zinc and acetanilid, or equal parts of sub-nitrate of bismuth and cornstarch, are substituted. If the patient will stand for the iodoform odor, a strip of 10 per cent. iodoform gauze covering ulcers (and changed frequently), will give excellent results.

Sores located on the shaft of the penis, or wherever they tend to dry and form crusts, blocking the chancroidal pus beneath, require a moist antiseptic dressing. Carbolic acid or lysol solutions are preferable to the more irritating bi-chloride. These dressings should also be changed frequently.

The complications of venereal ulcer are much more difficult to treat than the original sore, with the exception of balanitis and balano-posthitis, which are handled with the same methods as the lesion itself. Verruca aggravates the chancroidal process and requires excision and, perhaps, circumcision.

In inflammatory phimosis palliation is first attempted. The patient is instructed to immerse the penis in hot bi-chloride 1-2000 at frequent intervals, to keep the preputial sac clean with hot injections of Potassium Permanganate 1-5000, not to bind the organ with dressings, but to use a gonorrhoeal apron to retain discharges. If œdema is present excellent results are obtained by prescribing Apis 30. He is watched closely, and if no improvement in the inflammatory process appears within forty-eight hours, a dorsal slit or circumcision is performed. Infection follows either operation, the former being preferred, because of the smaller resulting scar, a plastic circumcision removing the V-shaped scar after healing of the sores.

Paraphimosis is converted into, and treated as, a phimosis. Its reduction is accomplished by hot applications, multiple punctures of its œdematous tissue, and pushinng the glans penis into the ring with both thumbs, while the index and middle fingers draw the ring forward. Failing in this, the constricting band is incised, which makes reduction easy.

Phlebitis is treated with moist antisepsis, and is usually easily controlled.

Phagedena we rarely see and is due to either a mixed infection or some other condition that lowers the tissue resistance. It requires radical local measures, associated with general systemic treatment. Thorough burning or excision, with strong and rigid antisepsis, is here called for.

Inguinal bubo, which occurred in possibly 80 per cent. of cases treated by burning and always suppurated, rarely occurs, and suppuration is frequently arrested with our modern methods. When it is found complicating chancroid, we first attempt to arrest pus formation by the application of ichthyol ointment 25 per cent. and a pressure spica bandage, and the administration of such remedies as Hepar, Belladonna, etc. When suppuration develops, bubotomy is the only treatment. The popular operations are a straight incision paralleling the inguinal canal, expression of the contents of the sac, and a pack; or puncture, expression of the contained pus, and injection or pack.

The writer of this paper was dissatisfied with the results obtained by these operations. The edges of the linear incision nearly always became inverted. Healing was slow, pockets and sinuses

formed, and the resulting scar was puckered and hard. Following the puncture with injection or pack was slow healing, and pockets and sinuses formed. In consequence he suggested the operation that is now used in our Genito-Urinary Dispensary.

The bubo is punctured at its highest point, the pus expressed, an incision paralleling Poupart's ligament is made with scissors to each extremity of the pus sac. The cut edges are grasped with forceps or fingers and a semi-circular incision is made at the extreme circumference of the tumor. Care must be taken to slant the edges of the cuts downward and inward. The base of the bubo is then curetted and all debris removed. The wound is antiseptically irrigated, and a tight pack of iodoform gauze inserted. The dressing is then completed with dry gauze and spica bandage. The wound is re-dressed in the next twenty-four hours with the iodoform gauze loosely packed. Thereafter the same treatment is followed out every other day, until healing takes place. Wet dressings or moist antiseptics are never used in the re-dressings. The advantages of this method are rapid healing, no inverted edges, no pockets or sinuses, and a linear, flat, soft scar.

Within the past few months, the writer had under his care a physician who was so unfortunate as to contract a mixed infection, and at the height of his primary general syphilitic outbreak developed double suppurative inguinal bubo. Bubotomy was suggested, and refused because of possible discovery of his condition. As a substitute a minute puncture was made in each tumor so small as to be almost a pin-point. Fully an ounce of pus was expressed from each, the buboes dressed with 1 per cent. formalin and a pressure spica. On the next day's dressing, the tumors were flat, the puncture was crusted over, and on breaking open, a small quantity of serum was expressed. A re-dressing of formalin was made, and on the fifth day there was no evidence of the buboes. This method has been repeated in several cases with excellent results, all showing serum or sero-pus on first dressing, and healing within ten days. The success of this procedure depends on the minuteness of puncture, expression of all pus, prevention of outside infection, by closing of puncture and killing inside infection, with formalin.

It should only be attempted in completely broken-down buboes that are not too deep.

BEFORE AND AFTER CARE OF CASES OF ABDOMINAL SECTION.

D. P. MADDUX, M. D., CHESTER.

Problems of surgical technique appeal, in a large degree, to the operator alone, and have no part in the paper which I present; but the non-operating physician is interested in the management and care of patients before and after abdominal operations, and this contribution is written to help him, rather than to interest the surgeons.

The most efficient aid the physician can render the patient and operator previous to operation is by obtaining the most precise and exhaustive knowledge of the physical condition of the patient, by making painstaking, repeated and thorough physical examinations, aided by exact laboratory tests, and determining, as far as human knowledge goes, the conditions of heart, lungs, kidneys, nerves, blood and viscera, and by a knowledge of the patient's physical idiosyncrasies and peculiarities.

I feel like making an especial emphasis of this point, because many conditions that are classed as post-operative are conditions that were pre-operative, and only discovered after operation because the patient was then under more careful scrutiny and observation; and some genuine post-operative conditions might be avoided if the patient had been earlier subjected to a more thorough study.

There are, of course, many abdominal operations performed with but little time to acquaint ourselves with the patient or give him any special preparation; but in a deliberate operation we should consider how, by attention to the general health, exercising or resting, diet, baths, attention to bowels and kidneys, we can get our patient in the most favorable condition possible. In the matter of the kidneys, it seems the greatest emphasis should be placed upon the quantity of urea and total solids.

EXERCISE.

Previous to operation that degree of exercise should be taken which best advances general health—it should always be within

the limit of fatigue or exhaustion—and had best be of the type that would calm, rather than excite. Few patients need more than one or two days in bed, except that posture is needed to deplete hyperæmic pelvic organs. The full-blooded and active are perhaps more benefited by the preliminary rest than the weak and anæmic, as Treves says:

"The strong man has his mode of life suddenly interrupted, his blood-vessels are full, his viscera have adapted themselves to the exigencies of an active life; his tissue changes are active and extensive; oxygenation is quickly disposing of the great refuse matter which is constantly accumulating at the very moment when the tide is abruptly checked. This man finds himself motionless in bed, every circumstance of his life is changed; he has had no time to adapt himself to his altered position, and it is a matter of little wonder that the inflammatory process which has been induced, runs riot and is not readily controlled." (Operative Surgery, Treves, Vol. 1, Paragraph 9.)

DIET.

If the patient is in good general health and the operation does not involve stomach, she may indulge in ordinary diet up to within forty-eight hours previous to operation. The diet had better be considered in relation to those articles of food and drink judiciously stimulating elimination; but if the operation is upon the stomach or upper intestinal tract, the patient is best prepared by a course of sterile liquid diet, with especial attention to the cleanlines of the the mouth and teeth.

Cushing found that the micro-organisms much increased in the stomach by solid foods, their number steadily decreasing as digestion advanced, becoming almost absent when the stomach was empty.

"The duodenum is often sterile, the number and virulence of the bacteria of the intestine increase in proportion to the distance from the duodenum, and attain their maximum at the ileo cœcal valve." (Abdominal Operations, Moynihan, p. 21.)

The day preceding the operation the patient should have all the water to drink that is desired. Indeed, they should be encouraged to drink copiously, often taking hot water to favor elimination.

PURGE.

The question of the pre-operative purge is still an open one with many surgeons. Empty intestines contain less coli commune and are easier for the surgeon to handle, but the extreme must be avoided of depleting the patient or the usage of such drastic and stimulating catharsis that the intestines will not readily respond after operation, when we really need it most. It is best to have no hard and fast rule in this matter, but be guided in the use of the purge or laxative by the individual patient's condition. My personal preference is Castor oil ℥j. to ℥ij., given from 36 to 48 hours previous to operation. The taste can be disguised by the foam of beer or malt, by coffee or by orange juice in the top and bottom.

The use of simple rectal enema early on the morning of the operation will generally be desired to remove the remaining gas.

For the past year I have followed with the most happy results the custom introduced by Dr. Van Lennep in his clinics of the hypodermic injection of 1-120th gr. of Atropine sulphate previous to the operation, followed by 1-60th of Eserine sulphate before the patient left the table; the amount of Eserine being increased if pus or infection is found in the belly.

BATHING.

A patient contemplating an abdominal operation should endeavor to get the skin of the entire body in as healthy and cleanly condition as possible by general baths and soaping and massaging the skin, the temperature and duration of bath being determined by the patient's general condition. I cannot but obtrude the observation that I believe the thorough mechanical soap and water cleansing both of the field of operation and surgeon's hands is of more importance than chemic solutions.

To secure the most composed mental attitude of patient previous to operation, is of helpful importance. Tact, diplomacy and watchfulness on the part of those who converse with the patient is desirable, not only exercising care as to what is said, but a more especial care as to the things left unsaid.

Permit me report two cases as illustrating at least the happy coincidence of the prophylactic treatment of hæmorrhage and shock.

Mrs. L. R., aet 30—a most typical and markedly hereditary hæmophilic, had been subject to two previous surgical operations of a comparatively trivial character, in each of which she nearly bled to death, and in which the operations were protracted on account of the inability to check the bleeding. One month previous to operation I started to give her Hamamelis Virg. tincture t. i. d. for the three days previous to operation; Calcium Chloride, grs. v, every four hours. Immediately preceding the operation she received a high saline enema containing ʒj. of Adrenaline chloride. A double salpingo-oophorectomy, ventral fixation and appendectomy were performed which proved absolutely uneventful, both during and following the operation, the amount of blood lost not being in the slightest degree excessive. It has not, however, altered the hæmophilic tendency, for she tells me a slight scratch still bleeds excessively. (Mrs. White.)

Mrs. J., æt. 36, from a previous curettage, and three months later an amputation of the cervix, had most alarming shock symptoms. Each of the operations were very brief and the ensuing shock very protracted and profound. Six months later, carcinoma being found in the uterine canal, the patient insisted on taking the risk of a third operation. For four days previous to the operation she received hypodermic injections of fifteen drops Adrenalin chloride every four hours. Immediately preceding operation she received a high rectal enema of normal saline one pint and Adrenaline Chloride ʒj. Twice, while on the table, were fiften drops of Adrenaline Chloride injected into the superficial veins of the arm. I performed an abdominal pan hysterectomy, yet the patient from this more serious operation, rallied promptly and did not at any time show symptoms of shock.

I quote these two cases for what they are worth. The thought is at least worth something as to how much trouble we may anticipate and at least attempt to prevent.

The complete consideration of the post-operative care of abdominal cases could not be comprehensive within the proper scope of this paper. In an uncomplicated case it is more important what we do not do, than what is done. The patient's first need is the nearest approach to complete rest that can be secured, keeping away of relatives and visitors, and making the environment as soothing and restful as possible. Thirst can be avoided if she has

received a high enema of normal salt previous to leaving the table, and can often be best relieved by repeating same.

The nausea can be combatted by Acetic acid, inhalation of oxygen, stomach lavage, often equally well secured by permitting copious drinks of water, which, when vomited, will wash out stomach. In an uncomplicated case liquid nourishment, such as table tea, albumen in water, milk and lime water, can be given as soon as nausea subsides. There has been a wide digression from the 24 hours of "no food or drink," and surgeons have found that their presence, when tolerated by the stomach, contribute in a large degree, to stimulate peristalsis. The toleration of the stomach is best determined by sips of hot water or table tea. I think practically all operators permit a liberty of motion, or rather of being moved, after section cases, such as was not tolerated a few years ago. Indeed, nurses are instructed to frequently change the position of a patient from the back to either side, as desired, believing the tendency to adhesion is often thereby lessened. The position of the patient will, of course, be influenced by the character of the operation. With shock or shock tendency, of course, the foot of the bed should be elevated, this being further emphasized in stomach or gall bladder cases. In pelvic cases, or those in which we desire drainage of lower abdomen, the exaggerated Fowler's position will be found best. The manner of treatment of post-operative shock from abdominal operations presents practically nothing not in common with all shock cases. Recently I have confined myself in the treatment of shock to the use of Adrenaline chloride injected directly into the superficial veins of the forearm, to hypodermoclasis or intra venous infusion of normal saline containing ʒj. of Adrenaline chloride.

I do not sympathize with the method of treating shock with the use of least efficient and potent remedies and gradually working up to the more powerful and efficient ones; but believe in making our initial treatment of it by the most efficient means at our command, and the methods suggested are free from the danger of accumulative effects, which, in the tardy absorption of drugs in the condition of shock is likely to happen.

The problem of enema and purge after abdominal operations is one involving a wide variance of practice. In brief, clean, uncomplicated cases we can practically give ourselves no concern. The

more protracted the operation, the more the intestines have been exposed or handled, the longer delayed will be the reactive peristalsis. I fear we very often use methods to produce the audible expulsion of the much desired gas or a bowel movement quite as much to bring to ourselves the knowledge and reassurance of favorable progress as from any real need of using them. We cannot expect many patients with empty intestines, in a quite prone condition, with the absence of food stimulation, to have an active degree of peristalsis. If the abdomen is flat, and we know the operation was clean, give them at least twelve hours' rest from the disturbing enema. Then commence with the low enema of soap and water, soap and turpentine, or glycerine and water, inserting in the interval the rectal tube or soft rubber catheter. If no results are obtained from this then use the high compound enema (Magnesia sulph., ℥ij; Ol. terebinth, ʒss; Ol. olive, ℥j; Glycerine, ℥vj.) Cases that will not retain the high compound as ordinarily administered for a period sufficiently long to be effective, can sometimes be relieved by the method suggested by Murphy, of placing a douche bag but slightly above the bed level and permit it to slowly percolate into the colon.

It is wise at each visit to auscultate the abdomen to determine rumbling, and from a practical standpoint, prompt and continued rumbling is almost as valuable reassurance as the expulsion of gas per rectum.

In regard to the repetition of the enema I believe we should be guided entirely by the amount of gas present and the strength of the patient. The milk of asafœtida will be found a valuable addition to the enema in nervous, windy patients.

The use of the alternate applications of heat and cold to the spine, as advocated by Dr. Tuller, should not be considered as a dernier ressort, but should be promoted to an earlier application.

Except in the face of an active infection, I see no warrant for the routine use of calomel and citrate within the first forty-eight hours after an operation. If a patient's tongue remains clean, belly flat, temperature and pulse normal, we can, not only safely, but wisely, wait for the indication for a purge to be based on precisely the same general constitutional symptoms as would indicate its post-operative use in a non-abdominal case. If, however, the danger symptoms of an ascending pulse, temperature and white cell count, a flushed, anxious face, a drying and pointing of tongue, an increase of nausea

and restlessness, a tendency to distention, with a lessened peristalsis as heard by auscultation, then we should stimulate peristalsis by the most active and persistent methods the patient will tolerate.

Think again of the Atropia and Eserine. Try repeated doses of castor oil, even if vomited, of croton oil in capsules or enema. Keep at work with enemas, all the while doing what we can to conserve the heart and strength of the patient. Turpentine stoupes, electricity, deep kneading with the knuckles over the colon, the passing of a hot cautery over line of colon, as suggested by Kelly, or the ether spray, as suggested by Ewald, are all adjuvants to be considered. I do not hesitate to add my endorsement to the judicious use of morphia for the relief of the pains of the first twenty-four hours. I have not found it delayed or lessened peristalsis, per contra, in children and some excessively nervous cases, I think it facilitated the expulsion of gas. Most cases will not need morphia, for it is astonishing what little discomfort follows many abdominal operations, but I do not withhold morphia when it is needed.

I fear the use of rectal feeding, after abdominal operations, is too frequently overlooked, and in the first few days we can often use it to advantage, particularly in the anæmic, or those who have been depleted by hæmorrhage. Those who miss the stimulation of coffee can sometimes earlier tolerate this method than per orem. In these days I think it is hardly worth while to drop a word of caution in regard to the continued watchfulness of the kidneys, particularly as to urea, the total solids, indican and acetone, but those of us who have been robbed of what seemed sure success by later kidney complications cannot but help call attention to this matter.

The matter of remaining in bed after operation is, of necessity, governed by the nature of the operation. I fear, however, that we still have a relic of obstetrical empiricism remaining in the getting up on the conventional "tenth day." When in doubt, keep them in bed. I doubt if the average patient from the most uneventful operation is really made more comfortable or recovery advanced by letting them out before the close of the second week.

A word of caution may not be amiss as to the unwarranted optimism on the part of many physicians as to the immediate results to be obtained from abdominal operations. Many patients are promised a speedy relief from conditions which an experienced operator knows will take considerable time to accomplish. The degree of sensi-

tiveness in wounds and individuals widely varies, and the removal of diseased tissue does not immediately take away the results of its protracted presence.

I recognize most keenly the defects and limitations of this paper. I have simply ventured to give some of the results of my personal observation and experience, trusting it may evoke a discussion calling forth the wider and better expressed opinion of others.

UP-TO-DATE OBSERVATIONS ON APPENDICITIS.

HERBERT L. NORTHROP, M. D., PHILADELPHIA.

Usually when a disease is prevalent and the laity are aroused to its seriousness and become more or less familiar with its symptoms, there results at least a partial control of its frequency and ravages. The public become educated in the knowledge of its general behavior, and more or less enlightened concerning its causes, symptoms and even its treatment. Not so, however, with appendicitis, which is every bit as prevalent now as at any previous time, and the majority of us believe even more so. Although the surgical treatment, at least, of this disease is very successful, a paper upon this subject is always apropos, for it must be confessed that the mortality is still high, and in spite of our best efforts has not been materially lowered of late years. Medical treatment is doing little or nothing to improve matters, and the surgeons are working hard to hold the reputation which they have earned for the cure of this serious affection.

No special interest attaches to the light or even temporarily severe case of appendiceal inflammation, perhaps more ordinarily dubbed acute indigestion, gripes, appendiceal colic, or the like, which promptly yields to free vomiting, an enema, the appropriate diet, or the complete removal of all food. Such cases are to receive cognizance because of their premonitory significance; as a part of the clinical history they are perhaps of some worth.

Furthermore, the valuable time of a State society in annual session should not be frittered away by the recital of everyday platitudes concerning a disease to the dangers of which even the public

are so keenly alive and about which they possess more or less general information.

But the mortality of appendicitis is still high, altogether too high, and this is easily explained by the following reasons: In the first place the disease is insidious, and at the same time often extraordinarily rapid in its development; secondly, surgical treatment is not instituted sufficiently early, and here the blame usually rests either upon the patient, who is averse to operation, or upon the physician whose faith is pinned to his internal remedies and ice bag; thirdly, because the streptococci infection is virulent, and is not intelligently attacked; fourthly, the operation may not be properly performed by reason of the operator's failure to protect the general peritoneal cavity in those cases where the infection is localized and possibly exists as a wrapped up appendix, or a walled off abscess. By means of gauze pads, or the like, properly packed in the peritoneal cavity, and the exercise of due care and caution in breaking up adhesions, removing the appendix or evacuating pus, the peritoneum will be protected. There is no part of the technique connected with an appendectomy of more vital importance than this, and a proper amount of time should be spent to do this and to do it well. Last of all, the mortality in appendicitis is high because the after-treatment is often faulty, both in method and in manner of application. While the simple cases operated upon get well easily, the complicated ones demand strenuous efforts to bring them under control.

Therefore, if the mortality of appendicitis is to be lowered, many factors must be dealt with, and each case must be handled intelligently and skillfully from the beginning.

I wish now, by the recital of two or three selected cases, to further emphasize my opening remarks, and then to call attention to a very patent fact in connection with this disease, viz., its remarkable, multiform or (perhaps better) kaleidoscopic character.

Case 1.—Male, age 14 years, was kicked in the lower abdomen by a playmate. (Traumatism is responsible for quite a number of cases of appendicitis.) Pain and soreness resulted and persisted for four days, when a typical attack of appendicitis developed. Upon admission to Hahnemann Hospital, four days later, his face was anxious, his abdomen was distended, rigid and tender; temperature, 100 3-5°; pulse, 116. I opened him at once, and found a large in-

durated gangrenous appendix and general septic peritonitis of a virulent character. After ligating the appendix and quickly flushing the abdomen with salt solution, I packed the wound with iodoform gauze and began a vigorous and well-directed warfare against his peritonitis and sepsis, in the following way: He was placed in the exaggerated Fowler position and kept there for five days. The Murphy rectal irrigation was started at once, but worked successfully for a short time only. I also gave him without delay 10 c.c. of antistreptococcus serum. This was repeated in fifteen hours.

In four days this boy was virtually out of danger, and on the fifth day after his operation, I removed the gauze packing and closed the wound with chromic gut and silkworm sutures. Good, prompt healing followed.

Case 2.—Miss B., age 18, had an attack of appendicitis seven days before I saw her. When the attack began she had just completed her normal menstural period. Three days after the onset of the appendicitis a profuse metrorrhagia appeared and constituted a special symptom in the case. She was now the sickest of the sick, semi-conscious, with a pinched face, turgid complexion (every bit as ominous as a pallor), abdomen greatly distended, with board-like rigidity and exquisite general tenderness. Temperature, 101°; pulse, 144. A vaginal examination showed pronounced tenderness, worse, perhaps, on the right side. Because the attack occurred contemporaneously with the menstrual period, and because the flow promptly returned, I believed the appendix must be low, and probably close to the right ovary. (Simultaneous menstruation and appendicitis mean a low appendix in nine cases out of ten.)

I operated at once, and found a long, gangrenous appendix down in the bottom of the pouch of Douglass, behind and below the right fallopian tube. The latter was even more inflamed and degenerated than the appendix. It was distended to the size of one's thumb, filled with pus and thoroughly necrotic. Both appendix and tube showed an advanced phlegmonous inflammation, and were removed. A general septic peritonitis of the worst kind with adhesions and multiple pus accumulations existed.

I made no special or protracted effort to empty the abdomen of its pus; my patient was all but in extremis. I packed the abdomen and began the after-treatment. This consisted of the Fowler position and effectual Murphy irrigation, which was retained nicely, and

was continued for twenty-four hours. An injection of 10 c.c of antistreptococcus serum was administered shortly after the operation, was repeated in one hour, and again in twenty-four hours. Improvement of the septic and peritonitic symptoms followed promptly, and in seven days I closed the abdominal wound.

Here are two cases of the very worst kind, the kind that usually die, and die promptly. The infection, the peritonitis and the general sepsis were advanced and severe, but were successfully combatted by hard work, with full credit given to the antistreptococcus serum and saline enteroclysis.

I am convinced that antistreptococcus serum is, in some cases, at least, of untold value, in fact, saves the life. I have had just as good and as positive results from it in a few other cases, and I believe we should use it, and use it early, where there is pronounced or even moderate sepsis.

CASE 3.—A young girl had what her physicians and I, his consultant, believed to be appendicitis. Her symptoms were badly coated tongue, constipation, pain in the epigastrium, tenderness and rigidity on the right side of the abdomen. There was a history of previous attacks, which probably were appendiceal in character. An inter-muscular incision opened into a clean, uninfected peritoneal cavity, and revealed something hard and stiff wrapped up in a piece of omentum, projecting forward from the anterior convex surface of the cæcum. It resembled a miniature flagstaff with its colors twisted around it. The surrounding cæcal wall was of a dark red color and indurated.

I carefully pulled away the omentum, a small piece of which I amputated, and exposed a stiff, straight fish bone, which had perforated the wall of the cæcum, and was now protruding for 1¼″. The full length of this fish bone was 2″. I trimmed the edges of the perforation and inverted it by a purse-string suture of fine linen thread, reinforcing the dimple thus made by a Cushing right-angle suture. The appendix was next removed; it was pale, contracted at its base and decidedly sclerotic, evidence of previously existing inflammation, but none at the time of operation. I closed the abdominal wound and recovery was easy and perfect.

We occasionally hear of a foreign body being caught in the cæcum, and still more rarely in the appendix. I recall once removing from a boy a medium-sized hairpin whose two-pointed ends

had perforated the cæcum, the latter constituting part of a scrotal hernia.

CASE 4 will illustrate the protean symptoms presented by a chronic, low grade appendiceal inflammation, or catarrh, or irritation (call it what you please) with more or less concomitant autoinfection, which explains the apparent eccentricities of the organ as manifested in peculiar ways in unusual parts of the body. I have already reported to this Society the case of a young man who complained of vertigo only when lying down. He had no other symptoms. His physician said he was the victim of autointoxication resulting from chronic appendicitis. I removed his appendix and his vertigo permanently disappeared.

Male, age 22 years, brought to me in consultation; has suffered from more or less continuous pain around the sacrum, worse on the right side and extending down the inner side of the right thigh to the knee. This pain is very much aggravated at night and prevents sleep. No history of syphilis; all organs apparently normal, and an examination of his urine was negative. I suggested the red iodide of mercury internally, which was administered faithfully with temporary relief, but the pains returned in all their fierceness Homœopathic remedies were given by a careful prescriber, electricity was used by an expert, and the man was dieted and watered all to no avail. I suggested cauterizing the lumbar and sacral regions with the actual cautery. This I did thoroughly, but it gave no relief. The man was desperate, and so was I. His pains, I learned, affected the obturator nerve principally, and a close examination showed that they followed the course of that nerve around the brim of the true pelvis and into the thigh down to the knee. Also pressure along the intra-pelvic course of this nerve elicited marked tenderness.

I inquired into this man's digestive history, and was informed that up to two years ago he had suffered with frequent severe attacks of indigestion; in fact, he was never entirely free from epigastric distress, flatulency and headache. But two years ago without any apparent cause, his stomach symptoms disappeared completely and then his pain, as above described, began. I now believed that here was a significant part of my patient's history, and that perhaps the stomach, appendix and obturator nerve had been affected successively in the order named, and that they bore some

causal relation to the symptoms experienced. I pictured a low, chronically diseased appendix, possibly adherent to the obturator nerve.

I suggested an appendectomy, and the patient said, "Anything.' I thereupon made a low incision in the right semilunar line and removed a five-inch appendix hanging over into the pelvis, lying upon, but not adherent to, the obturator nerve. It was constricted at its base, markedly clubbed at its distal extremity, and contained two fæcal concretions, one as large as a big orange seed. I could find no other lesion within the abdomen, so amputated the appendix and closed the wound. An uneventful recovery followed, and while he has not been entirely free from pain in the back, and occasionally has some pain in the thigh, we can honestly say, as he says himself, that his pain is gone. It is now nearly a year since his operation. He has gained in every way, sleeps well and holds a position of responsibility, one which he had to resign a year ago on account of his ill health.

I am a strong advocate of the intermuscular, McBurney, or "gridiron" incision for the removal of the appendix. This operation is to general surgery what that surgically pretty and delicate von Graefe extraction of the cataractous crystalline lens is to ophthalmic surgery. But there are reasons other than æsthetic and far more potent why the gridiron operation should be preferred. In the first place, it is the logical one as far as dealing with the abdominal wall is concerned. How natural to take cognizance of the anatomical layers and direction of the fibers of these layers, and separate their fibers instead of cutting them. The steps are easy and simple, just as much so to the experienced hand as dividing the linea alba or semilunaris; sufficient working room is permitted in the peritoneal cavity for all, or nearly all, interval cases and for many cases of acute attack, and if more space or a larger opening is required, it is a very easy matter to continue the incision in the appropriate direction; the walls of the opening fall together naturally and any expulsive effort, like retching or vomiting, serves only to approximate them more closely and to prevent any expulsion of intestinal coils. This I have seen several times on the operating table, and it is a forcible illustration of the value of the gridiron incision. If, after making this incision, it is found necessary to pack the peritoneal cavity, pack, that is all, for drainage will be satisfactory. The

wound is easily closed with fine chromic gut, and the resulting scar is strong. With primary wound healing there will be no post-operative hernia and no necessity whatever for the wearing of a truss.

Although this contribution to our Society Transactions is brief, and, I trust, plain and practical, I wish to summarize:

Antistreptococcus serum is of undoubted value in some cases of septic peritonitis. If possible, it should be used early.

Saline enteroclysis, intelligently used, is of proved value in many cases of septic peritonitis.

The chronic, low-grade, catarrhal form of appendicitis may and frequently does manifest itself in peculiar ways, and its symptoms are not always those of pain or tenderness, nor are they confined to the appendix and its immediate neighborhood, but may be found in parts more or less remote from the appendix.

While traumatism is a recognized cause of appendicitis, I wish to call attention to the probability, if not the fact, that more cases are due to trauma than we are wont to believe, and to point out the possible medico-legal status of such cases.

The advantages of the gridiron incision are many, and it should be employed unless there is some good reason why it should not.

DISCUSSION.

Dr. T. L. Chase: I have a few remarks I would like to make about these papers. I have enjoyed the paper of Dr. Maddux dealing with the previous and after treatment of abdominal cases, and also the one by Dr. Northrop. I have been very much pleased to see in Dr. Maddux's paper the concise way in which he has brought together the facts of the great change there has been in the trend of thought concerning the subject of his paper within the last five years. The doctor has mentioned all of the improvements that we have had in that line, and there are only one or two points on which I think there is some improvement still to be made. In the first place, regarding the giving of a laxative before abdominal section. If the patient is in good condition and has regular movements of the bowels, that patient does better without a laxative prior to opening the abdomen. I am sure of that. If such patients are given a high enema the evening before and a low enema prior to the operation, they will have earlier peristalsis than cases that have been purged. Another point is the giving of morphia after abdominal

operation. I am very certain patients do not get along as well when they have been given hypodermics of morphia as when they do not receive them. In view of these papers I want to offer some of my statistics in hospital and private work. In over 700 abdominal operaations one per cent. received hypodermics of morphia. I think some received it who could have got along better without it. One per cent. received hyoscin, 1-100 of a grain, and were relieved thereby 15 per cent. received a homœopathic remedy, aconite, belladonna or arnica, according to circumstances. The others required no treatment at all. The cases that receive morphia during or immediately after an abdominal section to my mind all have a coated tongue. The early taking of food is very much interfered with. Another point regarding post-operative vomiting. Dr. Ellsworth has gone over the abdominal operations I have done and has written a scientific paper based upon those operations, which will be in print shortly for your perusal, and in that he has found that the degree of vomiting depends upon the amount of ether and the position of the patient during operation. What I mean by that is that the position in which we have the patient during the ordinary abdominal section, if occupied for any length of time, results in those cases vomiting more than they otherwise would. In vomiting after ether, which we are bound to have in a certain per cent. of cases, I believe the patients get along better if they are given hot water frequently, and the instruction I usually give the nurse is that the more the patient vomits the more hot water to give him. They will take three or four swallows of hot water and vomit. They may do that two or three times, but will be relieved thereby. Patients always say it is a comfort to them to have large quantities of water immediately after coming out from under the effects of ether. As regards the movement of the bowels, Dr. Maddux has mentioned that twelve hours is about the time in which it should occur. I think in cases of abdominal section, where the patient has had immediate suturing of the opening done and where there is no indication for interference, those patients get along better without any of it. I very often allow them to go three days without making any effort to have them pass gas or have the bowels moved. I am sure they get along better by letting them alone. The doctor has mentioned two cases regarding control of hæmorrhage by putting patients upon adrenaline chloride, also giving them calcium chloride. I tried that remedy in a case

recently were I had attempted three years ago to remove a large fibroid tumor, which bled so profusely I had to desist with the operation and close the wound, otherwise she would have died.

The pressure symptoms from the tumor became so great that she came to me recently and said, "Well, this tumor must come out." So I placed her upon the same treatment the doctor has advised, and she went through with the operation without more bleeding than we would have in the ordinary case of removal of such a fibroid.

I was very much interested in what was said in Dr. Northrop's paper as to treatment in cases of appendicitis and those developing septic peritonitis. The treatment that he advises regarding the packing of the wound area and of the intestines as often carried out with gauze, I believe, is a line of treatment under which the patient gets along very much better if we do not institute it. I have carried out that kind of treatment, packing cases, and have operated and treated such cases without packing and I am very sure the cases that are not packed with gauze get along the best and that there is a very much lower mortality rate where they are not packed. Quite recently I have seen seven cases of septic peritonitis, five males and two females. Three of those when I opened the abdomn had free fecal matter in the abdominal cavity. Each of those cases was treated by cleaning the field of infection as carefully as possible and letting the general peritoneal cavity alone. Then you can flush with a normal saline solution, as I believe that pus is less likely to be absorbed when in its normal state than if it is diluted with saline solution when you have it rapidly absorbed, and I believe in many instances we hasten death where we flush that area too much and have rapid absorption of pus. Out of those seven cases six recovered, and five of them were closed immediately and the wound sewed up tight, although they were septic cases, two of them with drainage, but the drainage was only of the superficial field and by a small drain.

Dr. Maddux: I have nothing further to say, except that I had no intention of making the statement in regard to the twelve hour period. I simply placed that as the first possible time to have any reasonable anticipation of intestinal action, and I quite agree, where there is absence of danger signs, in leaving the case alone for a number of days before attempting to radically disturb the bowels.

BILIARY LITHIASIS—CHOLEDOCHOSTOMY.

DESIDERIO ROMAN, A. M., M. D., PHILADELPHIA.

In the history of clinical medicine, every organ and function have been taken into account and studied; the evolution of clinical pathology is but a series of periods during which the diseases affecting a certain organ, or a function, commanded more or less attention and recognition in medical minds. In the long road of medical achievements we observe that the pathology of certain organs, that is to say, that a certain disease in a certain organ or in its function, has called forth greater attention and study than other contemporary diseases; the popularity of such a disease and its study lived for more or less time until a new suggestion, a discovery, or research, would direct attention to a newer field of thought. Diseases have therefore undergone the natural course of history; they have claimed periods of especial recognition, have passed into temporary oblivion, and again been brought back into notice by further study, by their own manifestation under light of better recognition, and fathomed to a deeper level.

That has been the course pursued by medical progress from its earliest history to the present day.

The pathology of biliary lithiasis is ancient in principle; it has endured the search of all possible theories, and in its present conception it reveals but very little change from the original promulgations.

The catarrhal origin of biliary calculus is the corner-stone laid down long ago of the present structure which we now accept; the bacterial element in the formation of gall stones, a contribution of our present day studies, while admitted as a possible factor, does not endure the test as a constant etiologic power in the initial formation of biliary concretions.

The object of this paper is a practical one; it does not deal with the recitation of theories and statistical figures to draw conclusions from, it does not take up the analysis of opinions upon the subject, all of which you can find to your satisfaction in books and journals; but it is my desire to present to you the practical points from personal experience which clamor for urgent attention on the part of the general practitioner.

The development of biliary sediment and biliary calculi is not an acute process—never. It is always the result of a chronic condition, for gall stones are results and not primary formations, in a long course of functional and structural changes. While bile sedimentations and concretions can and do form anywhere in the bile channels, for practical value we must assume that gall stones have their origin in the gall bladder, and that a catarrhal condition in the mucosa of the gall bladder precedes the development of the calculi.

Suffice it to say that the experiments conducted by Naunyn and others have established that alterations in the mucosa of the gall bladder, that is, a simple catarrhal process, a cholecystitis, furnishes the albumenoid material, and epithelial exfoliation, which is the nucleus for the congregation of the chemical elements, the bile salts, thus, layer after layer, result in the completion of the stone. The theories in regard to the formation of the bile salts right there in the local changes, and as a product of the altered mucous membrane, are not sufficiently satisfactory for unanimity of opinion; and, therefore, dispensing for practical purposes with the true origin of these salts, we recognize in the composition of the various forms of biliary calculi, mainly the calcium-bilirubin, the cholesterin, the pigmentary, calcium carbonate, and the various combinations of these elements.

Experiments have shown that bacterial infection into the gall bladder, or any irritation artificially produced sufficient to set up a catarrh of the gall bladder, leads to the formation of gall stones The presence of the bacillus coli communis and the typhiod bacillus in gall stones at once proves, first, their share in the development of such stones, and second, the invasion of the bile channels from the intestinal canal. An irritation, therefore, reaching the gall bladder either by the way of the liver through changes in the character of the bile, or ascending from the intestinal tract, is likely to lead to cholecystitis and gall stones; its follows then that this intrinsic condition s dependent upon extrinsic causes.

It is precisely upon this point that the prime object of this paper is centered, namely, to bring out the outside sources which our daily experiences on the operating table prove to be the invariable sources of a surgical condition which might well be avoided by the proper medical prophylaxis.

In eleven cases of obstruction in the cystic and common bile ducts

which I have operated within the last year, the clinical history in all was that of the every day "gastralgia, chronic indigestion, dyspepsia and bilious spells," which the general practitioner is daily prescribing for. After a few years of these chronic complaints, to which both patient and doctor grow indifferent, suddenly an acute illness, with alarming symptoms, such as violent pain and vomiting, more or less icterus or none, a localized tenderness, and a few other unremitting and distressing signs—the patient is hastened to the operating table, and the diagnosis made clear by the delivery of one or more gall stones. That in eleven cases within a year obstruction should be met with in the common duct, suggests the frequency now-a-days of biliary lithiasis, or at least that sharper observation leads to its frequent recognition; and in view of the fact that operative interference for disturbances in the gall bladder and biliary ducts are demonstrating from day to day and case to case associated conditions in the liver and pancreas as the result of irritation from gall stones, we are confronted with a series of morbid changes of paramount importance, and of such serious consequences that it is the duty of the general practitioner to question those conditons, heretofore regard'd as of little moment, as the possible stepping stones to serious consequences, and thus regard a few attacks of indigestion in the individual as a forerunner of graver pathology in the liver, gall bladder and pancreas.

In this country, in a general way, we are wont to regard carcinoma of the stomach as a disease beyond help. When a case of carcinoma of the stomach comes to the notice of the surgeon it is, as a rule, past any lasting aid; the German clinicians, however, who indulge in finer scrutiny of their patients, frequently diagnose carcinoma of the stomach, and surgical intervention with them, at an early stage, has yielded an encouraging percentage of good results.

I speak of this to again emphasize the necessity for closer observation of our patients in every day practice, and that for the general practitioner a combination of both careful observation and *pessimism*, that is, assuming the worst possibilities first, until eliminated by exclusion, will bring us to the only rational way of practicing medicine, the prophylactic ideals which would place medicine on a more scientific basis.

The teaching points or morals, if you please, in these eleven cases, which I beg to bring to your notice, can be summarized as follows:

First, that biliary lithiasis is prevalent in the age of maturity, during the years of greater activity between thirty and sixty, if I may be pardoned for digressing from the age of Osler.

Second, the gall stones are more frequently met with in women than in men, a fact which may be explained by their more sedentary habits, tendency to obesity, and the systemic metabolism of pregnancy, for I have frequently observed the development of gall stones in women after their first confinement.

Third, that in nine out of these eleven cases, empyema of the gall bladder was met with, and that in such cases bacteria were undoubtedly instrumental in the phenomena.

Fourth, that in the operative procedure for the relief of gall stones, it does not suffice to open up and drain the gall bladder as the sole relief of the condition, but that, in every case, a careful and systematic search must be made for possible obstruction in the three main ducts, the cystic, the hepatic, and the common choledochus; for the obstructions in the ducts, particularly in the cystic duct, are accompanied by sacculation of a structure which it does not permit, and consequently does not warrant the satisfaction of subsequent escape of the stone by the established drainage of the gall bladder.

The operation for the relief of obstruction in the ducts by choledochostomy is usually a simple procedure; the drainage of the duct, like the drainage of the gall bladder, has been, in my experience at least, uniformly successful, and it does not add any greater severity to the operative interference, even when time was taken in two of these eleven instances to suture the opening in the common bile duct.

Bearing in mind then the facility with which biliary lithiasis can and does develop, and the prevalence in our present civilization of the various contributing causes for the same, it is high time to initiate a crusade against the formation of concretions in the biliary channels, not alone by reason of their direct local harm, but by their consequential influence of a graver nature, such as secondary pancreatitis and secondary carcinoma of the gall bladder and liver. William J. Mayo is of the opinion, from large experience, that the gall bladder is infected through the bile in the vast majority of cases, and less so from the intestinal tract, "especially in the more serious grades of infection, and often when no stones are present.

"In 90 per cent. of the cases of common duct disease," says this authority, "the infection comes from the bile and gall bladder in the etiology of these infections." Of such a degree of importance is the valuation of the commonly called dyspeptic complaints, that an error in diagnosis is by far a safer misttake than the failure to recognize will developed lesions. As B. Farquhar Curtis says: "Without reference to more important results, it is the general feeling of those with experience in the surgery of cholelithiasis that in the latent cases that while the patient does not present symptoms pointing directly to the biliary system, they are afflicted with various dyspeptic complaints, and that the latter can be relieved or permanently cured by operation."

In conclusion, I desire to plead:

First, in the sense that the recognition of the early signs leading to the development of cholelithiasis offer no special difficulties nor require extraordinary acuity of observation.

Second, that it is our duty to act promptly with prophylactic measures, and

Third, that the operative interference in the well established cases must be undertaken at the earliest possibility, to minimize complications, for the surgery of the gall bladder and bile ducts is not only comparatively speaking of very little danger, but remarkably successful.

DISCUSSION.

Q. I would like to ask the doctor what crusade he would initiate to prevent the formation of gall stones?

A. If a homœopathic remedy is faithfully used for a reasonable length of time and does not produce the result, think of something else.

Dr. T. L. Chase: I am very much interested in the doctor's paper, especially the point he has made regarding diagnosis and the tendency to the production of indigestion a long time before there are any signs of an acute attack similar to biliary colic. One point the doctor mentioned regarding the prevention of such a condition has been outlined by Dr. Goodno, I think, and in a number of cases brought very excellent results, that is, keeping the patient upon a diet free from sugars and starches, giving them meats and

fresh vegetables, especially those that grow above ground, and then producing as near as possible anæmia of the liver by keeping them on large quantities of Carlsbad water, giving them enough Carlsbad salts dissolved in water to cause two or three evacuations a day. I have seen a number of cases treated in that way and they have all improved, some of them I believe permanently. The doctor mentioned among diagnostic points the symptoms of indigestion, eructations of gas from the stomach, tenderness over the epigastrium, especially tenderness over the gall bladder. Putting patients who complain of chronic indigestion in that form, even if they have never had jaundice, (and many cases of biliary lithiasis never develop jaundice, although some do), placing them on a table in a semi-erect position, palpating deeply over the region of the gall bladder, you will nearly always elicit tenderness. Those patients are tender, and they are tender each time they have irritation from a minor attack of dyspepsia. The doctor also said that even if the diagnosis was confused with some other conditions, those conditions are all surgical. I was talking only a few weeks ago with William J. Mayo, whom the doctor has quoted. The two Mayos have up to this time done just short of 600 operations for gall stones. He said very often they made a diagnosis of gall stones, and upon opening the abdomen found an ulcer of the duodenum, and in some cases an inflammatory lesion of the pylorus, but as Dr. Roman has said, if the diagnosis is made that an operation is required those patients are permanently relieved.

PRACTICAL HINTS IN SURGERY.

J. H. THOMPSON, M. D., PITTSBURGH.

THE TREATMENT OF INOPERABLE CANCER BY TRYPSIN INJECTION.

The present status of the subject in consequence of researches and experiment by J. Beard, University Lecturer in Comparative Embryology, Edinburgh, and Dr. Shaw-Mackenzie, of London, is such that trypsin is used in special solution for subcutaneous injection into sound tissue preferably as near the cancer as possible. The trypsin injection is supplemented by the internal use of ex-

tract of pancreas, with ox gall, and the topical application of pancreas extracts. Fairchild Bros. & Foster's New York preparation of trypsin is in urgent request in Great Britain and on the Continent at the present time.

A DIAGNOSTIC POINT IN APPENDICITIS.

The patient is made to lie upon the back, with the lower limbs flexed and feet resting on the bed, knees being steadied by a third party. With one finger over the region of the appendix (a little external to McBurney's point) the doctor presses down with as much force as the patient will well tolerate, and while keeping up this pressure with one finger, palpates and examines other parts of the abdomen; much, if not all, of the pain complained of in other portions of the abdomen will have disappeared, the patient merely suffering where the one finger presses. As soon as this finger is removed, other tender points will reappear upon examination of the abdomen, as usually made. Thus far I have found it invariably present.

METHOD OF DIAGNOSTICATING FIBROMA.

The finger is passed into the rectum and pressed against the tumor, at the same time the uterus is drawn downward by a volsellum. If the tumor be ovarian, it will not move; if uterine, there will be great resistance to drawing down the cervix, which will clearly be continuous with the morbid growth.

In performing subcutaneous infusion do not allow too much fluid to accumulate at one area, otherwise necrosis may occur. Shift the needle to various parts, not by swinging it from side to side, but by partly withdrawing it and reinserting it to another area.

A POINT IN THE TECHNIC OF BREAST AMPUTATION FOR CANCER.

In cases where no glands are palpable above the clavicle, Wier, in the course of the operation, has been in the habit of passing the finger behind the clavicle, with the patient's arm held in the vertical position. He states that by this procedure enlarged glands may be

detected, which are impalpable otherwise. If the supraclavicular glands are found, an incision is made along the course of the clavicle and is extended upward along the posterior border of the sternomastoid; the glands are then easily excised.

RECURRENT GENITAL HÆMORRHAGE.

According to Prof. Goderlien, recurrent genital hæmorrhage after cessation of the menopause is an almost pathognomonic sign of cancer. It is not only the first, but for a long time the only symptom, pain and a purulent discharge appearing much later.

In the case of an intoxicated person who has received a severe injury, it is always best to empty the stomach at once by means of the stomach tube and funnel.

Never give an emetic to cause the expulsion of a foreign body unless it is known that the latter is of such a size and form that it can easily repass through the œsophagus.

In every severe injury of the hand or fingers perfect rest is desirable, and it is always of advantage to place the hand on a splint, so that the patient will be unable to use the fingers.

It is never wise to anæsthetize a patient in the presence of many people. It renders them more agitated and nervous. It is preferable to anæsthetize in an adjoining room, or to cause all but the anæsthetist and one assistant to leave the room until the patient is thoroughly under the influence of the anæsthetic.

For the removal of fish bones, pins, needles, etc., from the upper part of the œsophagus, if a bristle-probang is not at hand, make a little ball of absorbent cotton, lubricate it with a little butter, after it has been tied to a string, and cause the patient to swallow it. By pulling it out again with the string the foreign body can often be removed.

Remember that Bichlorid of Mercury, Carbolic Acid and Iodoform may all cause systemic poisoning, even in the small amounts commonly employed for dressings. The sublimate gives rise to diarrhœa, with pain and a rising temperature. Carbolic acid poisoning is attended by the well-known changes in the urine, sometimes with severe vomiting, lowered temperature and collapse; while iodoform may cause collapse or a rise of temperature, with a weak and feeble pulse, delirium and drowsiness, particularly in children.

At present there is a distinct reaction against gynæcology as a purely surgical specialty, and a tendency on the part of thoughtful observers to recognize general causes of local symptoms, and to direct their treatment accordingly.

In wounds made by coal on the exposed parts of the body, remove all the particles of coal dust; otherwise a disfiguring pigmentation might follow.

A very simple method of curing a corn is to excise it.

In hydrocele the base of the tumor is below the testicle; in spermatocele it is usually above. A milky fluid obtained by aspiration usually speaks for spermatocele.

In crying infants it is extremely difficult to determine the presence and location of tender areas. This may be readily accomplished by the administration of chloroform to the extent of *primary* narcosis. The physical examination then becomes very easy, and when a tender spot is handled it will be announced at once by lively reflexes.

To remove warts painlessly and with avoidance of scars, apply a supersaturated solution of potassium bichromate once daily.

Never incise a swelling in the course of a large artery without making sure first that it is not an aneurism.

Involuntary urination very often means a distended bladder, and in old men it should at once indicate an examination into the condition of the prostate. Vomiting, too, is often caused by distention of the bladder.

Bone tenderness, especially of the sternum and tibiæ, is frequently significant of sepsis.

Breast tumors, especially in the early stage, not seldom fail to present the classical signs by which their malignancy or nonmalignancy may be determined clinically. In all cases where the diagnosis is doubtful, a specimen of the tumor should be removed for microscopic study before undertaking a radical operation.

A tender, painful swelling just at or beyond the upper outer border of the breast, and near the edge of the pectoralis major, is usually an inflamed lymphatic gland. In its presence it is well to look for some skin infection about the waist line, e. g., furuncles, which are not rare at this site as a result of irritation by the corset.

Do not advise extirpation of large glands in any particular region

without making sure that they are not the early manifestations of leukæmia or Hodgkin's disease.

Choose intubation instead of tracheotomy, whenever possible.

The immediate operation (within 24 hours) in all cases of lacerated perineum, however slight.

An open or basket splint in cases of compound fracture, for a few days at least.

Wound clips instead of sutures for all skin wounds of the face.

Early, skillful, clean removal of a suspiciously malignant growth and its adjacent tissues. Use temporizing measures later.

Vaginal punctures instead of laparotomy in pelvic abscess.

Perineal section instead of the supra-pubic for enlarged prostates.

In dealing with secondary hæmorrhage from the rectum (whether bleeding vessels are tied or not), it is better to tampon with gauze wrapped about a piece of stout rubber tubing, than the gauze alone. The tubing allows any further bleeding to show itself externally at once; it allows the escape of flatus, and affords the means of introducing an oil injection to facilitate the removal of the tampon later.

A urethral endoscope will be found a great help as a means of introducing a rubber drainage tube into a narrow, tortuous sinus.

ON THE INDICATIONS AND CONTRAINDICATIONS FOR THE REMOVAL OF THE GALL-BLADDER.

Robson does not approve of cholecystectomy in every case of gall-stones.

If the gall-bladder presents a normal appearance, he merely does a cholecystendysis after the removal of the calculi. He limits cholecystectomy to cases of cancer, atrophy, stricture of the cystic duct, gangrene, empyæma, mucous fistula or serious injury. He describes his method of operation, which does not differ from that practiced by American surgeons, except that he frequently buries the stump of the cystic duct beneath the peritoneum.

Most attacks of appendicitis begin with vomiting, but if it is peristent, and, above all, if it is associated with constipation, distention and other local signs of appendicitis, operation is urgent. Later on, a constant vomiting and retching form the most marked signs of a general peritonitis, when immediate operation is the only hope.

ABDOMINAL OPERATIONS, TRANSVERSE INCISIONS IN.

Make use of the transverse incision, which is already widely used, when the abdomen is to be opened in the medium line, in operations on the appendix and cæcum, in exploratory laparotomies on the right side, in colostomy and resection of the colon on the left side. An advantage of the transverse incision is that it lies parallel to the natural wrinkles of the abdomen. In appendicitis unruptured, or during the interval, would advocate a transverse incision having its centre crossing McBurney's point and less than an inch and a half in length. A two-inch incision may be necessary in fat subjects. Should a larger incision be found neecssary extension is made toward the median line.

Sarcomata are composed of embryonic connective tissue, the cell element predominating. Classification is based on the shape of the cells, as the round, giant and spindle-celled sarcoma. They are found where there is connective tissue. They make their first appearance as nodules, single or multiple, are usually firm, but may be soft. They have one remarkable characteristic, and that is, the rapidity of the growth, which distinguishes them from all other tumors. They are most frequently found in middle life, and rarely in children or old age. They are usually painless until they begin to ulcerate.

They do not spread to neighboring lymphatic glands, this constituting one of the main differences between them and carcinomatous tumors. They are found most frequently in the ovary, testicle and the marrow of bone. The treatment is complete extirpation when this is possible. If there is not a reasonable prospect of getting away the whole of the diseased structure it is useless to operate.

Multiplicity of the tumors of the breast usually speaks against carcinoma.

Every tumor that grows rapidly should be removed, as it is probably malignant. Every tumor of the breast should also be extirpated as soon as discovered, together with all the glands and fat of the axilla; the chances are so strongly in favor of cancer that the risk of leaving it in situ is too great for any physician or patient to assume.

Dr. Munde recommends vaginal injections of bromide of potash,

one drachm to a pint of water, in cases of so-called irritable uterus, diffuse pelvic pains and hysterical neurosis in various parts of the body.

It is surprising how much information can be derived by abdominal palpation conducted with the patient in a hot bath, the temperature of the water being gradually raised to 105 F. It usually secures as much relaxation as does the administration of an anæsthetic, sometimes even more. In addition to the avoidance of the dangers and disagreeable features of narcosis, it has the important advantage that the patient is able to call the examiner's attention to sensitive areas.

TO ABORT A FELON.

A commencing felon will always be aborted by the local application of alcohol under perfect air exclusion. Cotton is saturated with alcohol and placed under the affected part and a thin rubber finger-stall applied over all. Seventy-two hours usually suffices to give relief or even effect a cure.

HYDROCELE.

The early reappearance of fluid after tapping a hydrocele does not necessarily mean that the operation has been a failure. It may be but an inflammatory reaction, subsiding spontaneously or under the application of unguentum iodini.

ALYPIN.

Dr. E. Impens (Deutsche Medicinische Wochenschrift) gives a preliminary account of a new anæsthetic compound termed "Alypin." It is the hydrochlorate of benzoyltetramethyldiaminoethyldimethylcarbinol. It is soluble in water, the solutions being neutral in reaction, and it may be sterilized by boiling without prejudice to the anæsthetic action. Alypin is easily absorbed by the mucous membranes and the subcutaneous tissue. The absorption of injected solutions is very prompt, and necrotic changes in the neighborhood of the injection have never been observed. The rapid absorption of the substance favors its anæsthetic action, which equals and even

excels that of cocain, as solutions of alypin are efficacious when diluted to a degree at which cocain becomes inactive.

The following are some of the conditions in the presence of which an examination for tabes dorsalis should never be omitted: 1. All primary swellings of the knee or ankle joint without apparent origin. 2. Sciatica and lumbago. 3. A deep ulcer on the base of the great toe. 4. Repeated vomiting at various intervals, with periods of well being intervening. 5. Abdominal pains without other evident cause.

Formula—To make a 1 per cent. solution add 5 drops to an ounce of water. To make a 1-1000 solution add one teaspoonful to the gallon, or 15 drops to the quart. Five drops to the quart makes a 1-3000 solution. Three drops to the quart makes 1-5000 solution.

GIVEN PERCENTAGES.

1¼ drachms to the quart makes ½ per cent. solution.
2½ drachms to the quart makes 1 per cent. solution.
5 drachms to the quart makes 2 per cent. solution.
7½ drachms to the quart makes 3 per cent. solution.
12½ drachms to the quart makes 5 per cent. solution.

Acetic acid brushed in line over a plaster of Paris bandage will render it soft and in a few minutes it may be cut with an ordinary knife.

To remove moles apply with a splinter of wood a small quantity of acid nitrate of mercury, carefully avoiding the sound skin.

HEROIC TREATMENT REQUIRED FOR WARTS IN ELDERLY PERSONS.

Nothing is more dangerous than to attempt the removal of warts in elderly persons with the milder caustics, such as nitrate of silver, for this will often supply the stimulus which leads to their transformation into epitheliomata. They are best eradicated by the dermal curette, by strong caustic, electrolysis, or if they are large, by excision.

TO PRESERVE INSTRUMENTS AGAINST RUST.

One part paraffin oil is dissolved in 200 parts of benzin, and the instruments, after being thoroughly dried and warm, are plunged

into the solution. Instruments with joints are worked in the fluid, so as to cause it to penetrate into all crevices, and the benzin is then allowed to evaporate in a dry room.

TO CLEAN RUSTY INSTRUMENTS.

Fill a suitable vessel with a saturated solution of stannous chlorid (chloride of tin) in distilled water. Immerse the rusty instruments and let remain in the solution over night. Rub dry with chamois after rinsing in running water, and they will be a bright, silvery whitenesss.

Another simple method of removing rust from instruments:

Solution of Almond Oil 1
Alcohol 4

Leaving the instruments remain in the solution over night.

FOR BLACK EYES.

℞. Tr. Capsicum ..... f.ʒ 2
Glycerine ..... f.ʒ 2
Flexible Collodion ..... f.ʒ 1

Sig.—To be applied locally.

TO MAKE COLORLESS IODINE.

℞. Iodin ..... f.ʒ 1
Aqua Ammonia ..... f.ʒ 1½
Carbolic Acid ..... Gtt 10 to 12

Shake well and wait just a moment and all color will be gone.

The therapeutic value of the iodin has not been harmed at all for local application. In fact, it can be used with better results to reduce a swelling than the iodin before being changed.

To preserve soft rubber for an indefinite time dip the tube, instrument, etc., in aqua ammonia diluted with ten parts of water. The ammonia bottle should have a rubber stopper.

Oil soon ruins rubber; it should be washed out or off with soap and water immediately after use.

ABSCESSES.

R. E. TOMLIN, M. D., PHILADELPHIA.

NOBLESSE OBLIGE.

If I am weak and you are strong,
    Why then, why then,
To you the braver deeds belong;
    And so, again,
If you have gifts and I have none,
If I have shade and you have sun,
'Tis yours with freer hand to give,
'Tis yours with truer grace to live,
Than I, who giftless, sunless, stand
With barren life and hand.

'Tis wisdom's law, the perfect code,
    By love inspired;
Of him on whom much is bestowed
    Is much required.
The tuneful throat is bid to sing,
The oak must reign the forest's king;
The rustling stream the wheel must move,
The beaten steel its strength must prove,
'Tis given unto the eagle's eyes
To face the glowing midday skies.

—*Carlotta Perry.*

In order that the thought in the mind of the writer may be easily recognized, and according to the association of ideas, set in motion the correct train of thought in the mind of each of you, he will first present the history of some cases of abscesses, then turn your thoughts to some scientific facts and truths, which you will easily note as containing much food for your gray matter to assimilate, and finally, to make some remarks directly upon the subject of this

essay. This course to some of you will appear like the White House at Washington, which, as the guide informs us, is like the Irishman's castle, having its front door open in the back yard.

CASE A.—Woman, about 65; was asked to see a case of abscess of the forearm by a doctor (believed to be a good prescriber). He said she was improving as well as could be expected; he had been attending her about four weeks; he stated there were a number of openings in her forearm from which flowed large quantities of "laudable" pus. When I saw the case her pulse was 160, temperature, 103.6°; respiration, 24; irregular chills, profoundly septic, profuse sweat, diarrhœa, distressing pains throughout the body, and very marked prostration. He removed the dressing, some cloths saturated with Calendula lotion, and was prescribing Hepar; as he did so he remarked to me that he thought it looked well, and asked me if I did not think so. I replied no, that it not only did not look well, but that multiple abscesses had already destroyed the life of the forearm, and unless an amputation at the elbow was immediately performed, the woman would die, and, which was likely, even if this was done, as she was profoundly impressed with the general infection. This information was so startling to the doctor, that, when he fully realized its import, he begged that some milder surgical procedure be instituted for a while, at least. I then suggested that free incisions, thorough drainage and an active supporting regime be immediately begun and tried for twenty-four hours.

When he informed the husband of my statements, the man was so grieved and angered that he at once discharged the doctor, and called in an old school surgeon, who confirmed my diagnosis and prognosis; advised amputation at once, but which was rejected, as the man said if none of us could guarantee her recovery even after amputating her arm, that she should die with it on; and, sad to relate, she did take it to the grave with her.

CASE B.—Robust woman, æt. 60; abscess of tibia. Was taken to see this woman by a doctor, who was a fine homœopathic physician, but who knew but little about surgery. He had been attending her for a month or more, and although he examined the limb daily, did nothing but advise simple external applications, and the use of the remedy prescribed. No surgical treatment of an operative kind would be permitted, and after an illness of several more months she died. When her body was lifted from the bed to the ice box by the

undertakers the lower half of her right leg dropped off, and large quantities of pus were seen.

CASE C.—Aet. 45; palmar abscess; machinist, and a man of fine physique. Shortly after midnight I was hastily summoned to see a man, who, it was said, was suffering from a catarrh of the hand, but which they told me had gone to his stomach so suddenly as to cause the greatest suffering to the man. The man lived within a square of my office, but I did not know him, so asked of the man who called me who the attending physician was, and why he was not sent for. He replied that their doctor lived at quite a distance, and the man was in such agony, to please come at once. Hastily dressing, I went to see the man, and found him in a profuse, ice cold sweat, an agonized look that I will never forget, a heart that was beating so rapidly and violently that it seemed it would burst through the chest wall, the man holding his hands against the epigastric region, and fairly howling for me to give him something for the horrible pain. I noticed he had his right hand tied up loosely with what appeared to be an old handkerchief. I asked to see the hand before prescribing any medicine, but neither the man nor any of his family would permit me to see it until I refused to do anything unless I saw the hand. As soon as the dirty and improper dressing was removed I saw a hand full of small holes, anteriorly and posteriorly, from which pus exuded, and the hand dead up to the wrist. The doctor (an old school man and an old army surgeon) had seen it only twelve hours before, and assured the man and his family that it was all right. I sent for him as soon as I saw the hand, and at once sought to relieve the man, but I had not been in the house but a few minutes when he fell back dead. He died so quickly that his wife had left the room but a moment to get something I had requested, and his daughter had gone to the second floor for blankets, and before they returned he was dead. About five minutes after he died his doctor came in, and when he looked at the dead man he was so surprised and shocked that he threw up both hands toward the heavens, and even the stray hairs on his bald head seemed to stand straight up in consternation, as he shouted, "Mein Gott, palmar abscess." For a long time he stood speechless, like a statue, gazing at the lifeless corpse, while the bereaved family were complaining bitterly to him of his failure to recognize and properly treat the diseased hand of the husband and father.

CASE D.—Abscess of the liver, æt. 55. Was asked to see this woman by a medical friend, who said he and some other medical friends believed the woman had a malignant abdominal growth. Her symptoms corresponded with those commonly observed in carcinoma of the liver. On account of some irregular chills, sweating, etc., etc., I told him I thought it was probably a deep-seated liver abscess. No medical treatment availed but for temporary relief, and after about five months' suffering with a marked cachexia and exhaustion she succumbed. A post mortem examination was made when a very large abscess on the upper posterior border of the liver was opened, and about three pints of pus evacuated.

CASE E.—Woman, æt. 45; tubo-ovarian abscess. This woman had as her regular physician an old school doctor, but in this last illness called in a homœopathic physician, known to be a good prescriber. Her illness continued in spite of apparently well selected remedies, the course seeming to suggest to him intestinal tuberculosis. Late in the case a swelling was noticed when palpating the lower abdomen, and the husband was informed that it was surely tubercular, and that there was no hope. The doctor was discharged and an old school surgeon called in, who, after making a very thorough examination pronounced it tubo-ovarian abscess. Upon opening the abdomen a very large mass with adhesions all about it was discovered. An attempt was made to remove the mass, but it was only partially successful. The woman succumbed from general sepsis. A simple case had it been recognized and properly treated.

The citation of these cases, all fatal, because in none of them was an intelligent diagnosis made early, if properly made at all, by the attending physicians, who, while good medical doctors, were unfamiliar with the surgical aspects of the case, consequently did not recognize the importance of early incisions, and thorough evacuation of the pus and free drainage, allowed the disease to progress, they trusting to an over-ruling Providence to interfere and save the lives of these patients, will probably make clear to all the reason for presenting this subject to you.

The very first question in philosophy is this:

What is the origin of things?

The very first statement of "the Bible" is an answer to this question, an answer simple, unequivocal, exhaustive, majestic.

The first question in science is, What is the origin of the material

universe? Only two answers are possible. The first is the answer of logic, and is this: "Matter never had any origin at all." The other answer is, "The first verse in the Book of God."

To go back to the origin or source of things, tracing the first steps of whatever has issued in greatness, whether material, intellectual, social or moral, is one of the instinctive impulses of our nature, especially of all noblest minds.

To the end of time savant, not less than savage, will speak of sunrise and sunset. However, as a matter of fact, the sun did not rise this morning; it is the rotation of the globe on its axis that gives us what appears to be a sunrise. We do not charge the almanac makers with ignorance or falsehood because they have told us that the sun would rise at a certain hour, and would set at a later hour. Nevertheless, although theoretically false, these phenomenal statements touching the heavenly bodies are practically true, and so true that on the basis of them the navigator, when, in mid-ocean will accurately calculate his longitude and latitude, and our astronomical clock at Washington will give the exact time of day to a continent. Prof. Proctor's testimony that "nine-tenths of the astronomers employ their powers in making observations at great pains and labor which are not worth the paper they are recorded on," is a plain statement of their tendency to be cranky and impracticable. The great boast of the mathematicians is that Le Verrier calculated where Neptune was before he was discovered by Galle at Berlin, but the fact is he missed it by over eight astronomical units, or over seven hundred millions of miles, and said Neptune was not the planet he was looking for. Mathematics is spoken of as being an exact science. Is it exact? Some are so one-sided they think it is everything. Mathematics in its place, like the miser, is good to count gains after they are acquired; but had man relied on mathematics he would have remained as ignorant of the fundamental truths of the universe as the Blackfoot Indians. Sir Isaac Newton owed none of his discoveries to mathematics. When his constructive imagination formulated a theory he tried to bolster it up with mathematics, but it often proved delusive In speaking about the physical sciences many men refer to them as being positive and absolute truth, basing their arguments solely upon mathematics and logic.

Knowledge is power as the saying goes, but is it enough to win success?

The many things you know constitute knowledge, and you may know all the contents of all the books used in a university, yet not gain success. Something else is needed. It is intelligence.

A man who possesses intelligence in a rare degree may have less than one per cent. of the knowledge of another man, yet become a far greater individual.

Intelligence consists of two essentials:

1. What a person knows.
2. What advantage that persons takes of what he knows.

Knowledge is necessary; experience is one form of knowledge, although it is generally regarded as the furnisher or provider of it. Perception is the collector of facts, and if keen, selects the important facts and stores them in the mind, so that you can get at them as readily as you have use for them. Knowledge educates only so far as intelligence permits.

Nature seems to place a limit to the powers of some persons to absorb and use knowledge. Hence the postulate, "Upon individual ability to recognize true greatness of individual power depends the measure of our success in life."

Abscesses may be defined as being the result of previous inflammatory processes, which by reason of the lessened power of resistance on the part of the tissues on the one side and infection and the arrest and multiplication of pus microbes on the other, the staphylococcus albus and aureus, and the streptococcus being the principal infective agents. They gain entrance through abrasions of the skin, or denuded mucous membrane, from injuries, no matter how slight the traumatism may have been. The same micro organisms in one case may give rise to a furuncle, in another case to a carbuncle, and yet in another case to the most serious forms of abscesses and profound infection.

The development and progress of a case depends not only upon the anatomical relationship of a part, but upon the way infected and the character of the micro-organism. The infection spreads through the blood current or lymphatics, as a rule.

The principle difference between infection and abscesses caused by the staphylococci and streptococci is that the former spreading by continuity of structure tends to produce suppurations which are circumscribed, while the latter spreading by the lymphatics produce diffused suppurations. Acute abscesses are due to causes mentioned,

and are the result of the moleculer death of the inflammatory exudate and of the inflamed tissues.

The chronic variety are usually due to tubercular lesions. Special forms of abscess are due to specific micro-organisms or mixed infections.

DIAGNOSIS.—Evidence of acute inflammation, marked redness, some œdema, pain slight at first, soon taking on a sharp, lancinating character owing to tension and impingement upon the delicate nerve filaments, later it becomes duller and throbbing in nature with the softening of the part, and the formation of pus. Chills of an irregular character, sometimes severe rigors, or in other cases no chills noticed. Erratic temperature; pulse increased, as a rule, sometimes very rapid, etc., etc., more or less profuse sweating. With the establishment of fluctuation there is usually an abatement of the more distressing symptoms. Whenever you find evidences of a swelling at first tense and not distinctly localized, but later circumscribed and pointing and getting softer in centre, suspect abscess. In regions where you have reason to suspect deep-seated abscesses you may have to depend upon exploratory puncture in conjunction with some of the above distinctly diagnostic symptoms.

PROGNOSIS.—Depends upon character, location, extent and duration. Good if easily reached and drained, and not in or near important structures. Guarded when in debilitated subjects, when many or grave complications exist, or when in or near important organs.

TREATMENT.—"Ignorance is the curse of God, but knowledge is the wing wherewith we fly to Heaven."—*Shakespeare.*

In the treatment of abscesses "the plan of taking a sledge hammer to drive a tack, or a tack hammer to drive a wedge," is obviously out of its latitude. To place every case that presents evidence of localized or circumscribed inflammation upon the operating table on the one hand, or where pus or abscess is suspected, or known to exist, to treat such cases expectantly (whatever that is), or to rely on mere external and internal remedies where incision and drainage are clearly indicated, is evidence of an intelligence equally incompetent and indefensible.

"Some nuts are harder to crack than others; but you can always get a hammer big enough to crack the hardest." Prophylaxis is

the ideal to which we should all aspire; this is possible in many cases, if, as soon as called to a patient sufferinng from acute localized inflammation, the part is put at rest in a proper position, which is an elevated one, as a rule, and frequently rest of the whole body as well for a few days. Cold applications if used early and persistently, in connection with rest and position are valuable. This may be applied in many ways, as you all know. Sometimes cold things are not agreeable, and then compression gently applied is tolerated, and both combined are good. Where stasis is marked cold applications are contra-indicated, and heat, either dry or moist, will assist the circulation, comfort the patient and assist in the absorption of the exudate. Moist dressings applied hot and used plain or medicated with any one of the many antiseptics. The use of antiphlogistine, or other preparations, generously applied, as needed, are of untold value. The medicinal treatment is, in the practice of the writer, an important factor. As a rule, whether the abscess is small or large, a simple case or a serious or complicated one, he prescribes carefully selected Homœopathic remedies, and their value is unquestioned. The remedies most frequently found useful are BELLADONNA, Bryonia, *Echinacea*, HEPAR, MERCURIUS, the Calcareas, SILICEA, Rhus, *Arsen. alb.* and *iod.*, *Arnica*, Iodine, Sulphur, Calen., Cistus. For glandular cases about the neck, Kali jod. Others according to indications. Free incision where inflammation is severe, and abscess formation is threatened is necessary and should be done. One or more incisions as free and extensive as indicated. If such were more regularly performed, there would be much less pain, the relief of the tissues from destructive tension, and the early and direct application of antiseptic solutions and dressings. The use of various antiseptics injected in or about the inflamed parts is passing out of general use. The writer has found the new preparations known as Veroform Disinfectant (saponified formaldehyde, 20 per cent.), Veroform Antiseptic (6 per cent.), Veroform Soap (6 per cent.), superior to Bichloride or any of the many other antiseptics. Formaldehyde gas is dissolved in a solution of neutral soap. The irritating formic acid decomposes a part of the soap and combines with the alkali, leaving the fatty acid free; this is filtered and a clear, stable solution of pure formaldehyde gas in soap is secured. The 20 per cent. solutions can be bought at any first class drug store. Two drachms of veroform disinfectant in a

pint of boiled water forms a solution exceeding in disinfecting capacity a 1-1000 solution of bichloride. Any of these veroform preparations are fully as effective and much less dangerous than those in general use. Any solution from sterile water, normal salt solution, formalin, bichloride, carbolic, bromin, iodin, creolin, lysol, et al. may be used as a lotion or for irrigating purposes.

The advancement made in bacteriology within the decade just passed exceeds in scope and importance those made in any previous century in medical history. An intimate acquaintance with pathogenic micro-organisms has familiarized us with the dangers attending their invasion, and has contributed greatly toward the perfection of methods by which they may be eliminated from the field of surgical action. The manner in which different agents destroy micro-organisms or inhibit their growth is worthy of special consideration, for they invariably act in one of two ways: Chemically by combining with the protoplasm of bacterial cells, thus destroying the germ, or by so modifying the environment of the germ that its virulence is diminished and its growth inhibited, or as a toxin by acting as a direct poison to the organisms.

As soon after diagnosis is made careful antiseptic measures should be instituted. This is important because of the danger of causing increased or mixed infection, that is, the grafting of a streptococcic onto a staphylococcic infection. Local or general anæsthesia may be needed. In fact, unless you can freely incise, thoroughly evacuate and curette if necessary, drain properly and apply suitable dressings, always anæsthetize. To give the case skilled service when operating first will make every feature of the case more satisfactory to all concerned. The practice of making small incisions or a single one, and squeezing out the pus is poor surgery, and an insult to the patient. When the abscess is superficial or easily reached pass the knife steadily through the skin and subjacent tissues until pus is reached. Evacuate with as little injury as possible to the neighboring structures. In a small and not deeply situated abscess the little finger can explore the whole cavity, in larger abscess the index finger; the opening should always be large enough to admit the exploring finger. All sloughs or softened tissues should be removed gently with the finger if possible, or the forceps, or curette. The use of the spoon or curette should be handled discreetly, lest nature's defense against absorption, viz., granulation

tissue, be too thoroughly removed, or violent bleeding started, or persistent oozing occur. All hæmorrhage should be promptly controlled.

After thorough evacuation of pus, sloughs, etc., you can irrigate or cleanse the cavity with any of the solutions previously mentioned. In order to prevent further infection and to promote rapid healing the writer has found nothing to excel normal salt solution, dioxogen, bromin solution, and last, but not least, the veroform solution (formaldehyde saponified).

Sometimes after incising rather freely it is wise to close it partly by a few sutures. Fenestrated tubes of as large a calibre as possible should be used for drainage and secured with a suture or safety pins. Special openings may have to be made at the extreme limits and most dependent part to secure perfect drainage. Antiseptic dressings, moist or dry, should be used generously, and suitable compression made when bandaging. Oiled silk or similar material can be used when wet dressings are applied. Such dressings should be kept moist or saturated and at a temperature agreeable to the patient.

The parts should not be bandaged too tightly, and put and retained in a restful position. It goes without saying that incisions whenever possible should avoid blood vessels, nerves and other important structures, and when upon an exposed part of the body, such as face, neck, etc., cosmetic effects should not be overlooked. Bovinine and other animal food products used locally assist in the repair in some cases where other ordinary measures fail. In cases of deep abscesses the Hilton method is safe and efficacious. As some of you may not be familiar with it I will describe it.

An incision of from one-half to one and one-half inches is made over the most prominent or dependent part of the swelling and suspected abscess; this penetrates the skin and deep fascia; a blunt, grooved director is gently insinuated through the tissues in the direction of the pus cavity until pus flows along the groove. The point of a narrow blade hæmostat or blunt pointed scissors is passed along the groove director into the abscess cavity; the blades are now opened and made to dilate the opening to an appropriate size. The abscess cavity is then treated as previously stated. Aspiration is called for occasionally in abscesses in cavities, or in or about joints. The renewing of dressings and the use of tissue

stimulants in sluggish cases will have to be decided according to the knowledge and experience of the operator. Some cases on account of profuseness of discharge, hæmorrhage, etc., may have to be changed several times in the first twenty-four hours. Usually, however, it is not necessary to change first dressing before twenty-four to seventy-two hours.

Chronic abscesses are usually tubercular or such as occur in debilitated subjects. Besides treating them according to broad surgical principles, forced feeding, the best possible hygienic and dietetic regime instituted and carefully selected remedies will do good. Special abscesses or those located in particular organs or dangerous regions are treated according to the location and gravity of the case, as the experience of the operator may suggest.

In conclusion, permit me to state that while the majority of doctors are able to diagnose, and many of them to operate ordinary cases of abscess, and some sufficiently skillful to operate any case, there are those who have given but little attention to surgical affections, know but little about diagnosis or operative treatment of such conditions, and yet fail to call in those whom they know are competent and equipped until it is too late to save either function, limb or life. If the surgeons were to state all the serious consequences to function, limb and life that have come to their notice as a result of the facts just mentioned, it would make a large and sad chapter, wholly unnecessary, inexcusable and indefensible.

THE RADICAL CURE OF INGUINAL HERNIA.

GUSTAVE A. VAN LENNEP, M. D., PHILADELPHIA.

The first operations for the cure of inguianl hernia consisted of simple ligature and removal of the sac, and were popularized by Socin. Needless to say relapses were numerous, not only because of the faulty technique, but also because of frequent suppurating wounds. In 1877 Czerny introduced his method of ligature of the sac at a point as high as possible, and closure of the external ring with sutures. The mortality of this operation is stated at 7

per cent., and relapses at 30 to 40 per cent. The method was adopted in slightly modified forms by such men as Ridel, Banks, Barker, Championniere and McCormac and universally practiced for the next ten years.

In 1886 Macewen published his method which consists of infolding of the sac by means of a purse string suture so as to form a pad just within the internal ring and careful closure of the canal by a special manner of suture. In the hands of the originator, the operation was very successful. In 164 cases there were two deaths, and in 107 of those that were traced there were but five relapses; a marked improvement over the Czerny method. Other surgeons have not had as good results, and it would seem that the success of the method does not depend so much upon the use of the sac as a pad to plug the internal ring, as it does upon the careful closure of the canal, a step which requires skill and much practice for its proper performance.

McBurney in 1888 attempted to make use of the well known contracting power of scar tissue to close the canal and rings. His method consists of slitting up the canal, ligating the sac high up and leaving the wound open to heal by granulation. The results have not been at all good, relapses are frequent, and the method has been practically abandoned.

The sac has been used as a plug or pad in several other ways than the Macewen method. Ball practices torsion of the sac and suture in the canal. Kocher (1892) twists the sac, brings it out through a small incision in the external oblique above the internal ring, lays it on the aponeurosis over the canal and sutures it down. Sloughing of the sac and imperfect wound healing not infrequently follow this method. Treves has modified Kocher's method by cutting away the sac after bringing it out through the aponeurosis, which does away with the danger of sloughing; Kocher has adopted this modification.

It was in 1888 that Bassini introduced his method, although the first operations were done in 1885. The method consists of slitting up the aponeurosis of the external oblique; high ligation of the sac; transplantation of the cord; suture of the internal oblique and transversalis to the shelving portion of Poupart's ligament, the cord being held up out of the way, and finally, suture of the split aponeurosis over the cord. Bassini's method has proved to be, in

the hands of surgeons generally, the most successful method for the cure of inguinal hernia. The present mortality, excluding strangulated hernia, is 9-10 of 1 per cent. In Carle's clinic in Italy relapses after the Bassini operation in 1,120 cases were only 2.16 per cent. Many modifications have been introduced by different surgeons, but the principle has remained the same.

In 1890 Halsted introduced a method which has given good results but not equal to that of Bassini. Halstead resects the veins of the cord so as to lessen the diameter of the cord, and also, because he says they are always enlarged. He then incises the internal oblique and transversalis muscles above the internal ring, and pulls the cord out through this incision. He then approximates all the muscles, including the aponeurosis of the external oblique, under the cord, with mattress sutures, obliterating the rings and canal and leaving the cord on top of the aponeurosis, covered only by skin and subcutaneous tissues. Halstead published a list of 440 cases operated by this method with one death. Relapses were from 4.3 per cent. in clean cases to 22 per cent. in suppurating cases. Atrophy of the testicle is not unusual after the Halstead method. In a list of 129 cases cited by O'Conner there was atrophy of the testicle in 20 per cent. The practice of incising the deeper muscles is one of doubtful value, and the majority of American surgeons do not approve of it. Halstead himself, in 1901, stated that he had abandoned it The Halsted method has been so extensively modified by the originator and his assistants that at present nothing remains of the original operation except the resection of the veins and the "mattress sutures." As it stands to-day the operation consists of:

First. The cord is *not* transplanted but is pushed down into the deeper structures and emerges at the site of the external ring. (See Fowler's method.)

Second. The veins of the cord are excised, but the vas is not lifted up or handled for fear of producing thrombosis of its veins.

Third. The cremaster muscle and its fascia, previously divided, is drawn up *under* the mobilized internal oblique by fine silk sutures.

Fourth. The free edge of the internal oblique is sutured to the shelving portion of Poupart's ligament.

Fifth. The aponeurosis of the external oblique is overlapped after the Andrews-Halstead method.

The results of this operation are superior to Halstead's former method.

Where the hernial opening is large and the conjoined tendon is atrophied. Halstead uses a flap of the anterior sheath of the rectus muscle reflected outwards and downwards and sutured to the under surface of Poupart's ligament. Bloodgood splits the outer margin of the rectus sheath from the pubic insertion upwards for two inches, this allows the rectus muscle to bulge from the cut, and it is sutured to Poupart's ligament. In cases where the internal oblique shows too great tension after suture, relaxation incisions can be made in the sheath of the rectus to relieve it. All these steps can be applied to the Bassini operation.

Some years after Halstead introduced his method, Fowler suggested that the sac be cut away at the internal ring and the finger introduced into the peritoneal cavity back of the inguinal canal. The surgeon then cuts through the transversalis fascia and peritoneum on his finger as a guide, the deep epigastric vessels being secured and cut between ligatures. This leaves a large opening into the peritoneal cavity into which the cord is dropped and the opening closed layer by layer, as any other abdominal wound would be. Fowler's method is said to give a very strong scar, obliterates the internal ring and the canal, the external ring being extended into the peritoneal cavity for the passage of the cord. Its disadvantages are that the cord is left lying within the peritoneal cavity, and, if it should become inflamed or infected, would convey the infection to the peritoneum. Again, the deep epigastric vessels are needlessly sacrificed, which seems to us to be poor surgery. The operation, however, has a good field in relapsed cases. Fowler also has practiced a method in small hernias occurring in children and young adults, which has gained considerable popularity. It consists practically of following the principle of the Bassini method without, however, transplanting the cord. The internal oblique is sutured to Poupart's ligament by one row of sutures, the cord being simply pushed down into the deeper structures and the aponeurosis of the external oblique is united by a second row. Fowler claims that by this method the sphincter-lke action of the arciform fibres of the internal oblique and transversalis are conserved. In the Bassini operation the sphincter-like action is destroyed. Hence the latter operation, according to Fowler, should be reserved for

hernias that have been in existence for many years, and in which the muscular fibres have been thinned and separated by prolonged stretching or truss pressure.

The main factors for success in any operation for hernia are:

First. Ligature of the sac as high as possible to overcome dimpling or bulging of the peritoneum at the site of the internal ring.

Second. Accurate suture of the canal with a suitable material.

Third. Perfect wound healing.

It has been repeatedly shown that the percentage of relapses is much less in those cases where the wound has healed by first intention than in those where suppuration has occurred. Suppuration does not necessarily mean infection. The prevention of the entrance of germs into the wound at the time of operation or subsequent is not the only factor to be considered in that much-desired act of perfect healing. All unnecessary handling and mauling of tissues should be religiously avoided, the sac separated by blunt dissection with fingers and the judicious use of the scissors, the cord carefully handled and not constricted too much by the sutures, and above all, perfect hæmostasis obtained in all portions of the wound without the inclusion of large masses in the ligatures. Scudder recommends that the sac be opened, cut across at the level of the external ring and the upper portion only removed after suturing at the neck. The lower portion, that which extends down into the scrotum in complete hernias, is left undisturbed. He has never seen a hydrocele or a cyst develop in it.

The operation should be performed as rapidly as possible, and the surgeon who sticks to one method will obtain the best results, because here, as in other fields, dexterity and rapidity can only be obtained by doing the same thing over and over again. The question of drainage is an important one, but drainage should not be overdone. The rule should be to close the wound without drainage. Where a large sac, as in an old hernia, has been removed, or where there is undue oozing, or the patient not in good physical condition or too fat, a small drain should be inserted at the lower angle of the wound, or through a separate stab wound in the scrotum. For drainage material we have found a folded strip of rubber dam more satisfactory than gauze or the cigarette drain. For superficial drainage we make use of the small silver wire drains so extensively used at the Massachusetts Homœopathic Hospital. A

spica bandage is applied in all our cases, and in order to make the pressure it exerts effective all the time, a ham splint is used for the first twenty-four to thirty-six hours as suggested by Scudder.

Next in importance to a correct operative technique in securing a good result, is the question of rest following the operation. A stay in bed in the recumbent position for from three to five weeks is quite essential. Many a case has been spoiled by getting about too soon, before healing has reached the point where the scar can withstand the severe intra-abdominal pressure brought to bear against it by the assumption of the erect position. We also do not approve of the wearing of a truss or pad subsequent to the operation except under special conditions. We prefer to have our patients wear a snug spica bandage for two or three weeks after getting about, then discontinue all support. We believe also we have seen good results follow massage of the abdominal muscles when they have been thin and weak. If possible, the patient should make use of a low inclined water closet seat when having the bowels moved, so that the inguinal region is reinforced by the support given to it by the anterior surface of the thighs pressing against the lower abdomen. For a period of three months following the operation there should be no hard manual labor.

There are a few important points in the technique of the Bassini as practiced by us to which we want to call special attention. After the sac has been ligatured or sutured at a point as high up as possible, the ends of the ligatures are left long and threaded on large, full curved Hagedorn needles. Under the guidance of the fingers the needles are passed under the internal oblique and transversalis muscles, and outside of the peritoneum and transversalis fascia to a point well above the internal ring and towards the median line. Here the needles are made to pierce all the abdominal muscles, about one-quarter or one-eighth of an inch apart; the skin and fat being held aside and the threads pulled taut and tied. This draws the stump of the sac away from the weak spot, i. e., the internal ring, and places it against strong muscular and aponeurotic structures. The liability of relapse is thereby lessened. We notice that this step in the operation has been adopted by Halstead and his assistants in the description of what they have termed the "Johns Hopkins operation" for hernia. This modification of the usual technique was first introduced by William B. Van Lennep, and,

under the name of the "Hahnemann Hospital method," has been in routine use in that institution for the last ten or twelve years. We look upon it as a very important step in any operation for the cure of hernia.

Another point to be remembered in following out the Bassini method is to introduce one or two sutures *above* the internal ring, joining the internal oblique to the under portion of Poupart's ligament. These sutures were not in the original operation, but have since been added, because they have been found to further constrict the aperture of the ring and support what is naturally a weak spot. Lastly, in suturing the aponeurosis we make use of a continued suture of chromicized catgut, begininng above and working down until the external ring is reconstructed to the desired size. The suture is then made to traverse back to the starting point, being applied very much as one puts in a Cushing right-angled suture. It turns in a fold of aponeurosis, bringing broader surfaces in contact, and completely buries the first line of sutures.

Since last October I have operated twenty-four cases of inguinal hernia, all after the method of Bassini as just described. The results have all been primarily good in each instance, although it is too early yet to claim permanent cures. In all my cases the suture material has been No. 1 chromicized catgut. Four of these cases presented features out of the ordinary sufficient to warrant their being briefly presented. It may be of interest to state that we have been impressed by the frequency of the congenital type of hernia. We are inclined to the belief that the majority of hernias are of the congenital type, or at least, that there is a congenital defect in the development of the inguinal canal in the form of a peritoneal tube of varying length and width, extending into the canal from the opening of the internal ring, which, in the developed hernia, forms a sac. There is only needed an extra strain brought to bear against this weak spot, or a further weakening of the abdominal muscles to allow a loop of gut to pass out. Sixteen of our twenty-four cases showed the signs of congenital hernia. Let me refer those who are interested in this subject to an excellent article by Russell in the London Lancet for March 12, 1904:

Case I.—J. M., male, colored, 59 years of age. A right inguinal hernia appeared at about the age of twenty years, after some heavy lifting. In spite of a truss the hernia had escaped on several occa-

sions and given trouble. Three days before the hernia came down and could not be reduced. Bowels moved until day before operation; no vomiting or nausea. Operation Hahnemann Hospital, April 13, 1906. Ether anæsthesia. Hernia was of congenital type. the cæcum forming part of the neck of the sac. The latter was filled with blood stained fluid, contained small intestine (lower ileum), no adhesions. A tumor, the size of a hen's egg, was attached to a loop of the gut about five inches from the ileo-cæcal junction; a smaller nodule two or three inches further away. This growth prevented the reduction of the hernia. As the bowel was somewhat damaged, although not distinctly gangrenous, six inches of the gut including the tumor were resected and the ends joined by a Murphy button. The Bassini operation was then carried out. The patient did well and the button was recovered in a little over five weeks. Drs. Sappington and Elliott report the tumor to be a myxofibroma.

Case II.—L. W., female, 43 years of age. Complete left inguinal hernia since fifteen years of age. Operation Hahnemann Hospital, October 13, 1905. Morphia-scopolamin-ether anæsthesia. Sac contained small intestine, which was recognized as being the ileum. A medium sized Meckel's diverticulum was found springing from the free border of the intestine, tapering down and ending in a fibrous band, which was attached to the interior of the sac. It was removed and Bassini's operation performed with a good result.

Case III.—J. L., male, 43 years of age. Left bubonocele of several years' standing. Is increasing in size but does not extend into the scrotum. Operation Hahnemann Hospital, April 13, 1906. The bubonocele proved to be a hernia of the urinary bladder, bulging outward at the site of the external ring. The deep muscles were wanting altogether at this point. The diagnosis was verified by the passage of a sound. To the outer side and above the bladder was found a small empty hernial sac. This was removed, the bladder pushed back and Bassini's method carried out with satisfactory results.

Case IV.—J. L., male, 13 years of age. Right oblique inguinal hernia. Operation West Philadelphia Homœopathic Hospital, May 11, 1906. External ring filled with fluctuating. irreducible mass, size of a lemon. Usual incision showed this to be the hernial sac. distended with about two ounces of straw colored fluid. The sac extended down to the testicle, which, however, was provided with

a well formed tunica vaginalis. The neck of the sac was very large, admitting two fingers with ease. The tip of the appendix congested and stiff, presented into the sac, and was easily drawn out, bringing the cæcum into view. The head of the latter was then seen to form a part of the upper portion of the sac. The appendix was removed, the cæcum separated from the sac and the opening into the peritoneal cavity closed by suture. The Bassini operation was then performed with a perfectly satisfactory result.

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INTUSSUSCEPTION.

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In obstruction of the bowels intussusception will account for one-third of the cases. While rather rare in adults, it is the most common form of obstruction in children, and in infants almost the only form known.

Statistics of the last twenty-five years show this form of bowel obstruction to have increased in frequency. In St. Thomas Hospital records from 1879-1883 there were ten cases out of 20,000 cases admitted to the hospital.

From 1899-1903 there were ninety cases out of 31,000 admissions.

In intussusception a portion of the bowel becomes invaginated into the gut below, so that the intestinal canal is doubled upon itself and consists of three layers, the upper one being inverted into and

being encased by the lower. As the location may be almost any portion of the intestine, we have many different names, minor distinctions, giving rise to various complicated appellations tending rather to mystify than to lead to a clear and comprehensive undersatnding of the subject.

It will be easier to classify them simply in the order of their frequency, as ileo-cæcal, enteric, colic and ileo-colic.

In the ileo-cæcal, the lower end of the ileum passes into the cæcum, the apex of the invaginated portion being the ileo-cæcal valve.

In the enteric, one portion of the smaller intestine, usually the jejunum, is swallowed by a portion below.

The colic variety occurs most frequently in the region of the sigmoid flexure and the upper end of the rectum.

The ileo-colic is seldom found, the condition being a passage of the ileum through the ileo-cæcal valve into the colon.

The causes of intussusception are various, the chief being irregular contractions of the intestine.

In infants it is usually preceded by some disturbance, such as diarrhœa.

Foreign bodies, or the occurrence of small growths on the wall of the intestine, particularly the small polypoid forms, which, hanging down into the lumen, irritate and set up what might be termed a local peristalsis, resulting in the polyp being dragged down and pulling the bowel along.

Small cancers also are found, forming the apex of an intussusception.

PATHOLOGY.

In consideration of the pathology it is important to note that the apex of an intussusception is a fixed or constant point.

The increase in length is obtained at the expense of the lower portion, as the apex travels on, it causes reflexion of an increasing portion of the receiving layer.

An intussusception consists of three portions, the intussusceptum, or the part drawn in; the intussuscipiens, or the receiving layer, and the reflected portion, or the part of the intussuscipiens which is bent upon itself. Thus we have, counting from without inwards, three complete thicknesses of the bowel wall concerned in the forma-

tion of an intussusception, namely, the outer wall of the intussuscipiens, the reflected portion of the same and the intussusceptum.

Quite important from an anatomical point of view is the presence of the mesentery. As the intussusceptum travels along, the mesentery becomes more and more constricted as it passes over the neck of the intussuscipiens, and slowly but surely, interference with the circulation of the included loop takes place. At the same time, owing to the pull on the mesentery, the direction of the intestinal tube and the calibre of the intussusception is altered. The vessel in the mesentery being constricted, the intussusceptum and the reflected layer become swollen and œdematous, and if the constriction at the neck of the intussuscipiens be tight, the circulation on the intussusceptum may be entirely cut off. The result is hæhorrhage into the lumen of the bowel and inflammation of the mucous membrane, which give rise to the chief symptom of an intussusception, namely, the passage of mucus and blood.

When the constriction is very tight, the arrest of the blood supply may be so complete as to lead to gangrene of the whole length of the intussusceptum, a condition to be expected after three to five days.

I spoke above concerning the change in the calibre of the gut due to mesentery; this has the effect of obstructing the passage of the solid fæcal matter. In the early stages before much swelling and alteration in the direction of the canal occurs, liquids can pass. As the swelling becomes more intense, the obstruction becomes greater, and more so by the fact that as the intussusceptum increases in size, it curves towards the mesenteric border, until finally its apex becomes more or less firmly pressed against the wall of the intussuscipiens and a mechanical blockade is added to that already produced by the swelling. Further, the pull of the mesentery causes the opening of the apex of the intussusceptum to become changed from a round hole to an elongated slit which still further increases the obstruction.

When this obstruction is thoroughly established there is no passage of the intestinal contents from above, even though the patient's bowels may be acting freely; all that is passed is a large quantity of mucus and blood derived from the inflamed mucous membrane and the engorged vessels of the intussusceptum.

This swelling of the intussusception—due to the engorged ves-

sels—forms one of the chief obstacles to an easy reduction of the intussusception.

The intussusceptum soon becomes so swollen that it cannot be gotten out of the intussuscipiens without considerable force, and attempts to reduce it in its swollen condition may, and very often do, readily lead to cracks in the wall of the intussuscipiens, which may involve all the coats and which certainly do involve the peritoneal coat extensively.

Among other changes which take place is an adhesive peritonitis between the opposed peritoneal coats of the intestine. Peritonitis occurs between the coats of the intussuscipiens and the intussusceptum, provided always that the latter be alive. If it be gangrenous no peritoneal adhesions occur except at the neck of the intussuscipiens where the two layers become matted together. This has a two-fold result; on the one hand, if it forms a possible obstacle to reduction it is nature's method of protecting the peritoneal cavity, for with firm peritoneal adhesions at the neck—if the patient lives—the gangrenous intussusceptum may separate, and the continuity of the bowel may thus be restored without any perforation having taken place into the peritoneal cavity.

SYMPTOMS.

Are those of acute intestinal obstruction to which are superadded others so distinctive that an intussusception can generally be diagnosed from the other forms of acute intestinal obstruction.

The onset is generally rapid and accompanied by collapse and vomiting, and the other general symptoms of acute intestinal obstruction.

The distinctive symptoms are constant tenesmus, which is especially marked when the intussusception is of the colic variety, or when an ileo-cæcal form has reached the rectum; there is a constant desire for the bowels to act, and this is not as in other cases of intestinal obstruction, but is accompanied by the passage of mucus tinged with blood, and sometimes with a certain amount of fæcal matter.

An abdominal tumor soon forms which takes a sausage shape, and which is most commonly found in the right iliac region; it is not always easily made out, even when the patient is under an

anæsthetic, because it may pass up under the ribs or below the liver, and may be entirely concealed. Usually it can be felt, at any rate in early stages, under an anæsthetic. It varies somewhat in consistence, and it can often be noted that the tumor either changes its position or alters its shape.

These symptoms serve to diagnose the condition from other forms of intestinal obstruction, and besides this, the age of the patient is an important element. Acute intestinal obstruction in infancy without an external hernia is practically always due to intussusception.

RESULTS.

Acute intussusception is very fatal in young children, and usually causes death in three or four days. Occasionally, especially in older subjects, it may be followed by recovery, which ensues as a result of gangrene of the intussusceptum, accompanied by soldering of the neck of the intussuscipiens to the intestine above. These cases are usually followed at a later date by annular constriction of the bowel and symptoms of chronic intestinal obstruction.

Spontaneous reduction of the intussusception is very rare, although some hold that it can readily occur. The period at which the intussusception can be easily reduced is usually very short, as a constriction of the mesenteric vessels of comparatively short duration leads to so much œdematous swelling of the intussusceptum that its reduction is rendered difficult. This to some extent depends upon the anatomical form present, and is most rapid in the ileo-colic form in which the ileo-cæcal valve grips the small intestine extremely tight and leads to rapid and complete strangulation.

TREATMENT.

The only form of treatment admissible is reduction of the intussusception immediately the diagnosis is made. The case cannot be watched. The surgeon is not justified in hoping for spontaneous recovery, and the sooner active steps are taken the better. There are two forms of treatment which aim at reducing the intussusception which may be termed the operative and non-operative.

In the non-operative treatemnt an attempt is made to force back

the intussusceptum from below by injecting air or fluids of various kinds into the bowels so as to distend it and exert pressure on the apex of the intussusceptum and to force it out of the intussuscipiens. The operative measures consist in opening the abdomen and exposing the tumor and squeezing the intussusceptum out of its sheath.

NON-OPERATIVE MEASURES.

Up until comparatively recently the classical method of reducing or attempting to reduce the intussusception was by injection from the lower bowels, and a number of cases recovered by this method, especially if the attempt be made early, that is to say, within the first few hours after the onset of the affection. There are, however, a number of objections to this method.

We may summarize the chief objections as follows:

1st. It is only useful within the first twelve hours, and if the surgeon places much reliance on the method he may be led to try it long after the time for its success has passed.

2d. Even under the most favorable circumstances, namely, when applied immediately after the intussusception has occurred, the method does not succeed in anything like one-half the number of cases.

3d. The point of greatest importance is that there is very great uncertainty as to whether the method has succeeded in any given case, and several hours must elapse before this fact can be definitely ascertained; that is to say, the surgeon may conclude at the time of the operation that the tumor has completely disappeared, and yet soon after the patient's recovery from the anæsthetic the symptoms may set in anew and thus valuable time may be lost.

4th. The patient is exposed to a double shock when the method fails, because the distention of the bowels is not unaccompanied by shock, and if it fails, the extra shock caused by the necessary laparotomy is likely to prove fatal.

5th. The method is absolutely of no use in the true enteric form or in the ileo-colic varieties, and it is not always possible to diagnose which variety has to be dealt with.

6th. The method in careless hands may actually kill the patient from rupture of the bowels.

OPERATIVE MEASURES.

Here we may have a choice of two methods, the combined inflation and laparotomy, or what is preferable, by laparotomy alone.

PROVIDED GANGRENE HAS NOT SUPERVENED.

In the first the abdomen is opened and the tumor found with the exploring hand or fingers, and while the operator keeps the tumor within reach, if possible, of the eye, the assistant very gradually inflates or distends the bowel. This distention should be done very slowly, and at least fifteen minutes should be spent in the process. As soon as the air or fluid begins to exert force on the apex of the intussusceptum the action may be gently aided by slightly squeezing on the bowel below, by which means it can frequently be reduced.

If the force from below shows no signs of reduction of the intussusceptum, then reduction will have to be performed as in simple laparotomy.

In the preferred method of simple laparotomy the abdomen is opened, the location of the incision varying with the situation of the tumor. If in the most usual location, the right or left linea alba may be the proper site, or through the rectus muscle, or even the median line.

The abdomen being opened the tumor is sought and found and brought either out of the cavity or into plain view of the eye, when, by grasping the bowel *below* the tumor, the intussusceptum may usually be squeezed out and the bowel carefully inspected. At this point if no gangrene has occurred, the walls should be examined for tears or cracks, the intussusceptum being usually by this time very friable.

If any such tears or cracks are found they may be sutured with catgut or silk.

Now a point which to me seems very important, the site of the lesion, should be carefully enveloped in hot wet towels, and be allowed some short time for the circulation to be resumed. Unless the operator is quite *certain* that the circulation is regained he should not return the bowel to the abdomen. Provided the circulation is assured, the bowel may be returned, the abdomen flushed with salt solution and the walls closed in three layers of sutures.

IF GANGRENOUS.

If gangrene has set in we will find one of two conditions present.

If advanced, the bowel will be found securely agglutinated at the neck of the intussuscipiens and the intussusceptum be felt within.

Several operations have been devised for this condition, and each has its advocates. The whole tumor may be excised and an end to end approximation of the cut ends be made, or the lower portion of the bowel may be incised, opposite the mesentery, lengthwise, from lower end of intussusception to neck, and the reflected portion and gangrenous intussusceptum excised and the incision closed by a row of Limbert sutures.

In this latter method, as in the case of the sloughing off of the intussusceptum, the bowel usually is left with an annular constriction.

In case the agglutination at the neck is not of such a character as to permit the foregoing, the tumor may be excised, and, provided good healthy bowel can be found, an end to end approximation may be made, or the openings of the upper and lower portions brought into and fixed in the incision to be followed later by an end to end anastomosis.

The mortality in intussusception has of late years decreased remarkably. Older writes of twenty or even ten years ago give the mortality as 70 to 80 per cent.

Under modern methods, by laparotomy, as soon as diagnosed, this has been lowered to between 12 and 35 per cent.

STORY OF A GREEN APPLE.

K. B., age 14. Seized during the night with symptoms of cholera morbus, with the exception the loose movements of bowels were conspicuous by reason of their absence. Vomiting was a prominent symptom, some pain during the night felt throughout the abdomen. Castor oil was given but with no result. I was called at 8 A. M. and found the little paient suffering with some slight pain in abdomen, vomiting with no nausea and thirst. The only error in diet that could be detected was the eating on the day before of a "green apple."

The indicated medicine was prescribed with injunctions to eat nothing and to try and move bowels with soap suds enemata. A couple of hours later word was received that nothing had passed but some shreds of mucus and blood. At noon came the alarming symptom of collapse, skin blue and cold, cold sweat, pulse 130.

Vomiting continued, the thirst was great and water in large quantities was taken, only to be thrown up along with some sour smelling, slightly dark sediment. No fæcal odor present at this time. Atropia and camphor was given, and an acute obstruction of the bowel diagnosed. No tumor could be felt, although in the left iliac region a slight dulness could apparently be found.

Consultation was called, and it was decided that the collapse was so profound that it would be practically out of the question to operate until some reaction set in. Camphor and verat. alb. were given, but the collapsic condition continued, the cold sweating to some extent improved. The pulse rate went up to 150, and the respirations to a corresponding rate.

In the meantime some enemata were given, plain water, soap suds, glycerine, magnesia and turpentine, but no result except mucus and blood. The patient was constantly of the opinion that the bowels were about to move, but nothing came. Finally some valuable practical negative experience was obtained in the effort to give a compound high enema, but still no result.

Finally, the patient was placed on an ironing board, and with the nozzle of the syringe inserted into the rectum and the bag held high, she was gradually raised to an angle of 60 degrees and kept there for ten minutes. No result from this.

Some two hours later the pulse grew so rapid and small that it could not be counted; some fæcal odor to vomit, and it was decided to open the abdomen at once. By this time there was a moderate distention of the bowels, the skin surfaces continued blue and cold, and an anxious expression of countenance. Help was obtained and chloroform and oxygen administered by Dr. Taylor. I will confess that it was with fear and trembling, but to my inexpressible relief, when completely under the influence of the anæsthetic and moved onto the operating table, the pulse became full and regular at 152, and continued that way throughout the operation.

Owing to the fact that there was doubt as to the situation and variety of the obstruction, an incision 4″ in length was made in the

median line, and the bowels exposed to view. As abdomen was opened some sero-fibrinous fluid poured out. As an area of dulness had been detected in the left iliac region it was explored first, but nothing found.

Then turning to the right side, opposite to the umbilicus, the typical sausage shaped tumor came into view. It was in the jejunum, and was about 5″ long. The bowel was dark red and the peritoneal coat dulled.

By grasping the intussusception from below in the right hand and taking a gentle hold of the upper portion with the left, taking care not to pull but the very slightest, the intussusceptum was squeezed out with no apparent damage to the peritoneal coat. After careful inspection, the seat of the lesion was enveloped in hot wet towels, and kept so enveloped for some time until circulation showed signs of recovery, a very important point in technique.

Owing to the presence of the sero-fibrinous fluid spoken of, it was decided not to close the abdomen but to put in three drains, one to the right and under the liver, one to the left toward spleen, and one in cul-de-sac of Douglas. Plain dry gauze was used and dressings applied with adhesive covering.

By this time the pulse was 150, respiration rapid but good, cheeks rosy and skin showing signs of warmth. She was put to bed and hot water bottles applied; recovered from anæsthetic in good condition.

The next problem was to get the bowels moved, and for this purpose 1-10 grain calomel and soda tablets were given, one-half hourly for five hours, and at end of seven hours one-half bottle of citrate of magnesia. Aside from restlessness and extreme thirst, she passed a fair night. The next morning some small amount of fæcal matter was passed, and the nurse telephoned me to know if she should give an enema, and was told to do so and save results. Upon my arrival the nurse showed me what she called a "prize package," a large chamber three-fourths full of fæcal matter, very soft.

I concluded that the bowel must be very empty, but on the following day an equal amount was passed. The second day after the operation, the condition was favorable in every respect, except for the thirst, which was excessive, the cry was water, water all the time, and when allowed a drink it could be distinctly heard to pud-

dle in the stomach, and once about three pints was vomited. She was also extremely restless—could not lie quietly in any position for more than an instant—but would throw herself from one side to the other of a large double bed.

That evening at 12 midnight I gave her two tablets of ars. alb. 3x, and in five minutes she placed herself in a comfortable position and slept for an hour and a half, the first sleep in five days, and from that time on there was no occasion for worry.

On the third day she was again anæsthetized with kelene and drains withdrawn. Kelene N. G. On the eighth day she was again placed on the operating table and anæsthetized—chloroform and oxygen—and the peritoneal edges loosened, the muscles and fascia freshened and the wound closed, using ordinary No. 2 catgut for the peritoneum, twenty day Van Horn chromicized gut for the muscles and fascia, and silk for the skin.

Being a child she could not realize the importance of lying still, which resulted in prolonging her recovery, for on the third day upon looking at the wound I found that the twenty day catgut was not holding, and about three inches of the wound was open.

I was much relieved to find that the peritoneum had held, and as no unfavorable symptoms were present, I allowed the wound to heal by granulation, using sterile adhesive strips to bring the edges together, and we finally had a good, firm scar.

In conclusion, this case illustrates what has been spoken of above, that nothing short of laparotomy is of any use in the enteric variety.

REPORT OF THE

SECTION OF SANITARY SCIENCE.

Internal Secretions, by W. H. Holsberg, M. D.
The Public Bath, by W. F. Baker, M. D.
A Scientific View of Life, by R. E. Tomlin, M. D.

INTERNAL SECRETIONS.

W. H. HOLSBERG, M. D., LEBANON.

It is impossible for me to include everything of importance that can be said on this subject, in a paper timed to fifteen minutes, hence I shall touch upon such matters as seem to me of the greater importance, only. The hope of finding means to aid and cure the injured, sick and afflicted, and even guarding against disease, has been the motive and stimulus which impelled men, in all ages, to try, experiment and demonstrate the utility of all manner of drugs, chemicals and products, even of the most nasty and questionable nature, used as lotions, potions and panaceas. This is true even today. When liquefied air was produced, in anticipation of what was hoped for it, most wonderful results were proclaimed. Radium, likewise, had a similar expectancy, cancer was to be handled in miraculous fashion and elaborate methods have been evolved with a hope of furthering and perfecting modes of attaining these results, but only time, experience and trial finally settled their sphere of usefulness and first announcements are hardly ever realized, yet marks of progress, are a reward for laudable zeal and endeavor. It is thus with organotherapy: earnest workers have proved that certain facts pertaining to it are well established and though it has so far not been able to measure up to the prophecies of the pioneers in the field of investigation along these lines, the results, in some respects, are quite gratifying.

The earliest use made of the suprarenal glands, of which I have personal knowledge, was the saving of them, at butchering time, drying the same and in case of accident they were shaved up into chips and tied on the wound, whenever accessible—this produced a nice-looking wound and blanched it, as will be readily understood. For internal use, they were put into small table-salt bags and salted and smoked with hickory smoke, along with the other meats, then when a case of hemorrhage of any kind occurred some gland was cut up and chewed and sometimes the juice swallowed.

The blanching effect of adrenalin is used to good advantage now, in eye surgery, nasal cavities and in short wherever a bloodless operation is expedient. Internally used, a rise of arterial pressure is the result; large doses, used as injections, produce serious respiratory symptoms, dyspnœa, respiration becoming very hurried then slows down, followed by prostration, on to paralysis of the extremities. It is therefore necessary to use it cautiously and in moderate quantities, then it may be used in shock following operation, also functional disease of the heart with lowered arterial tension.

Myxœdema.—The thyroids, of which an extract is made are used in cases of infantile myxœdema with very marked benefit; the characteristic signs of the disease are, marked increase of the bulk of the body, coarse features, thick lips, broad, thick nostrils, large mouth, vague, expressionless, unintelligent look, slow thought, poor memory, running on to idiocy. These symptoms vanish nicely by its use. The cause of the disease is ascribed to deficient or arrested action of the thyroid. If the thyroid gland be removed by operation, thyroid feeding is often imperatively necessary; it is also well not to remove the gland entirely, in operating, with the hope that what is left will perform some of its necessary functions. A milk diet is best for those cases, avoiding meat entirely. The athyria is sometimes not easily diagnosed in children, till they are weaned, milk contains some thyroid secretion which accounts for the aggravation when the milk is no longer used.

Cretinism.—Cretinism is also a form of stunted development, owing to a deficiency of the thyroid gland. The mental and bodily abnormality is characteristic, the protruding tongue is about the earliest of its symptoms. This, too, can be surprisingly improved by the use of thyroid treatment. Thyroid extract is indicated in persons who suffer much from low temperature, being uncomfortable and chilly constantly.

ACROMEGALY.—Acromegaly signifies large extremities, also large features. Often only the lower extremities are elongated and enlarged, which is usually the case in gigantism; the head and body may then be only of ordinary size. It is due to aberrant development of the pituitary body. The use of thymus extract has been found beneficial in those who suffer much from heat. The pituitary body acts also as governor over the adrenal system. Pituitary feeding, it seems, should benefit cases of infantilism. Pancreatic extract acts along similar lines. In a case of delayed union after fracture, ununited at one hundred and ten days with perfect reduction and immobilization. after fifteen days' use of pancreatic extract union was very satisfactory.

SPERMIN.—Spermin is a glandular product of great potency. It is a great oxidizer, it is useful in neurasthenia, locomotor ataxia and certain forms of epilepsy and cachexiæ.

OVARIAN EXTRACT.—Ovarian extract may be of greater use than thyroid or pituitary in acromegaly, because it eliminates calcium, a quality greatly desired in over-growth of the osseous system. Ovarian extracts will benefit patients whose ovaries are undeveloped and shrunken, it is also indicated for the obesity following ovariotomy and the menopause and for the nervousness, headaches, flashes, tremors. and even insanity. Obesity and gigantism, artificially produced, are well known to poultrymen, who practice what is known as caponing the fowls; as a result, their natural weight is doubled.

The great stimulating factor of the governing center (the pituitary body) of the adrenal system is iodine; the same is true of the thyroid. The ductless glands are intimately connected by means of the sympathetic nervous system and to some extent with the lymphatic system; their relation one to the other, no doubt, is measurably reciprocal and their secretions play an important part in the functions of other organs which were formerly considered the most important, in fact the only ones to which physiological action was attributed. This chain of glands is dominated by the adrenals, which, in turn, are directly connected with the anterior pituitary body through the solar plexus, the splanchnic nerves and the cervico-thoracic glands of the sympathetic, which small organ (no larger than a pea), has been proved to be the governing center of all oxidization of the body. The thyroid body may have some part in this function also.

The adrenal system consists of the anterior pituitary body, the thyroid gland and superior cervical ganglion, the thoracic ganglia, the greater and lesser splanchnic nerves, the solar plexus, the suprarenal plexus, the two adrenal glands, and the posterior pitutiary body the governing body of the anterior pituitary body's nervous supply and a general center of the cerebro-spinal system.

I am indebted to the Journal of International Therapeutics, Sajous, H. Batty Shaw, Cohen and others for some of the observations herein contained.

THE PUBLIC BATH, AS PRACTICED IN THE PUBLIC BATHING INSTITUTIONS OF CITIES OF FIRST CLASS, AND THEIR RELATIONSHIP TO LOCAL INFECTIONS.

WM. F. BAKER, M. D., PHILADELPHIA.

Cleanliness and the beneficent influence of a bath must practically be taught to the ignorant and forced upon them. Admitting this to be the case, and seeing its need, most cities of the first class have established bathing facilities for the poor and for those who do not have them at home. While it is desirable that every family should have its own bath room, it is as yet early for such social condition to be present. To remedy this long-felt want many of the public baths have been opened to children and adults alike and the advantages to be derived therefrom are thus enjoyed until better social conditions exist.

The good results that have followed from the use of such institutions, both in the general betterment of the health of the bathers and of the community and in the lessening of acute infectious diseases, has been told time and time again; but the object of this paper will be to point out a few of the weak places in this magnificent system, and to set forth a plea than many of these be correcetd and overcome. The objections raised here can be easily overcome without any specific legislation, simply by a careful watch being made of the bathers and the condition of the pools by those who are in authority, or the attendants of such places. The thoughts for this

paper occurred in the treatment of numerous cases of local infection occurring in a locality where the poor are thick and the bath houses used excessively. Towards the middle of the season there appeared for treatment several cases of furunculosis, impetigo and an acute eczema, but these were attributed to the heat and general climatic conditions. As the summer advanced more cases occurred until it was suggested that the bath houses might be the origin of the conditions. A careful watch was made, and without a doubt it was finally concluded that many of the cases originated there. Another quite common infection and one which spread rapidly when it broke out was the acute contagious disease of the conjunctiva commonly known as pink-eye. This disease, perhaps, gained the greatest headway of any. Many cases followed in succession and persisted throughout the summer.

Taking up the first and most common disease met with, namely impetigo, this, as you know, is an acute inflammatory disease of the skin occurring usually on the face and extremities. It consists of an eruption of discrete pustules, dense and surrounded by a slight inflammatory base. In a few days they dry up and form a thin, yellowish crust which soon drops off and leaves behind a normal surface. This disease is recognized by all authorities as being of a contagious nature and auto-inoculable. This condition spreads rapidly by contact and is indeed one of the most common infections of the skin to be met with in the summer time. As to the real nature of this condition, it is now looked upon as an acute infection, although many predisposing causes may be present. The scabs formed in impetigo are moist, yellow and form in thick patches. The surface is uneven and often indurated. The color is dull yellow, often tinged with green or brown. When the condition has lasted for some time the surface becomes lamellated and scales are heaped up on top of one another, and also where the disease is spreading there appears at the edge of the crust a fresh outbreak of small pustules. On removing the crust a raw, moist suppurating surface is found. This condition when well established, while it does not threaten life, usually runs a course of from two to three weeks, but in the chronic stages it may last much longer. An interesting feature of the condition is its peculiarity of recurrence. In the scrofulous or in run-down systems the disease assumes a most obstinate phase. Where it attacks the scalp we meet with perhaps

the most disgusting form of the disease. Here the hair becomes matted, and a thick discharge takes place, which at times is quite offensive in odor. If the condition spreads and is allowed to go untreated very often the glandular system becomes attacked by reason of a pus infection and abscesses of the gland result. The condition spreads after a time until it assumes more the character of a pustular eczema. This was the condition that attracted attention first. Many cases of this disease presented themselves for treatment and during the summer some twenty-three cases in all were treated, each giving the history of having attended the bath on one or more occasions. Both adults and children were affected but the disease, owing to the care and attention that the adults gave it, did not assume such proportions as in the children, but this was evidently due to the fact that the adults placed themselves under treatment as soon as the first evidence was made known.

(2) Acute contagious conjunctivitis, acute muco-purulent conjunctivitis, epidemic conjunctival catarrh, pink eye, Koch-Weeks' bacillus conjunctivitis. This form was very frequently seen during the summer, possibly eight to ten cases being treated. This condition is an inflammatory condition affecting both eyes, due to the presence of a specific germ discovered by Koch and by Weeks. It is markedly contagious and will pass from one to another with great rapidity. The usual history of these cases is that after one or two days of itching and burning of the eyes there develops a severe inflammation attended with watering of the eyes and inability to see, eyes painful to light. After awhile this discharge becomes thick and the eyelids glued together in the morning, occasionally they are swollen and very much inflamed. The discharge later becomes quite purulent. This acute stage lasts from four to ten days and the disease runs its course in about two weeks. There may, however, develop a sub-acute form of the condition which lasts much longer. Both eyes are affected, sometimes one eye is affected first. This condition is at times quite epidemic and was particularly so in this observation. During the summer case after case presented itself for treatment coming from a certain bath, thus showing the danger of contact. While this condition is not necessarily dangerous to the eye it proves very annoying and, owing to its tendency to spread, it is a troublesome ailment. Another form of inflammation of the eyes met with, but not so frequently, is the

purulent conjunctivitis. This is an acute inflammation of the eye accompanied by unusual swelling of the lids, serous infiltration of the bulbar conjunctiva and a free secretion of contagious pus. This effect is caused by the introduction into the eye of some infectious material, and the majority of cases are due to the micro-organism of Neisser. Fortunately only a few cases, one or two, could be ascribed to the bathing, and still here there is a reasonable doubt in these cases, but again can it not be said that such conditions could readily be spread in bathing establishments, particularly where the water has not been changed or the pool cleansed after the adult bathing? This disease, as you know, reaches its climax in about two or there days and gradually subsides in from one to two months, but it may pass into the chronic stage, then lasting for some time.

(3) Furunculosis. Recently this condition has been shown by Escherich and others to be caused by the entrance of pyogenic germs into the follicles of the skin. Several cases of this were noticed where the disease affected the scalp, the face, and shoulders and when once started appeared in crops over quite a period of time. These small boils, while they are not serious, produce a condition which at times is exhausting to the system.

(4) Scabies. This quite common disease, many cases of which were seen during the summer, has been long recognized as a contagious disease due to the burrowing into the skin of the acarus scabiei. This takes place where the skin is usually the thinnest, as under the arms. It consists of a small papule showing the entrance of the acarus and the characteristic burrow from one-quarter to one-half inch in length appears as a fine brown line in the skin. The usual history of these cases is that in three weeks time or thereabouts from the beginning of the ailment there is a general spread of it over the body.

(5) Ringworm. These also formed a large percentage of the cases seen and it usually attacked the hair of the scalp. It occurred as a small circular patch on the head and spread at its outer margin; many of the smaller patches formed into one larger one. There was attendant loss of hair and the peculiar circular arrangement of the disease was sufficient to establish a diagnosis. This, as you can see, would be very readily spread in a bath of public nature.

The following conclusions seem justifiable and the following suggestions are to be made:

1—Many of the local skin infections and specific eye diseases are spread by reason of indiscriminate public bathing.

2—Acute inflammation of the eye, contagious in character, form the largest percentage of cases of sufferers from infection.

3—Shower bathing offers many advantages over the plunge bath for those suffering from any infection.

4—The use of individual towels and wash-rags or sponges should be compulsory.

5—Each individual should be limited to one bath a day.

6—The duration of the bath should not be over fifteen to thirty minutes. The children especially should be driven out of the pool at the end of that time.

7—Careful watch should be instituted by the attendants and any child suffering with any of the diseases likely to prove contagious should be subjected to shower bathing.

8—Nuisances of all kind should be positively excluded from the bath.

9—Wherever possible a separate bath for children should be provided.

10—The water in the pool should be changed as frequently as possible or, preferably, there should be a continuous in-and-out flow of water.

11—It has often been said that the bathing of the unwashed of a great city is a tremendous task, and no doubt it is, yet there are many features of it that require consideration, and while the general benefit is everywhere felt it cannot be asking too much to pay some small attention to the details thus recited.

DISCUSSION.

Dr. Z. T. Miller: It would be interesting to know how many of these diseases the children would have if they never had a bath. If these little folks contract diseases when they go in the bath it seems to me it is a self-evident conclusion that they are better off without it than with it. It seems to me that if 7,000 children go into a bath in one pool in a day, that is a good many, and it is a question with me whether the diseases that are attributed to the bathing were really caused by the bathing or not. If you take 7,000 poor chilren in a city I question whether in a certain length of

time, say, in 30 days you would not have the same manifestations of these diseases that have been enumerated here as the results of the bath whether they took a bath or not. I do not know whether cleanliness is always next to godliness. I think it is a nice thing to be clean. I think it is a nice thing for everybody to have a bath if he wants it, but I really can hardly believe that all the diseases enumerated here were the result of the children taking a bath. I should imagine if a man had gonorrhea and he would get into a pool of water, and he was having a considerable discharge, and that water never was changed, that in all probability there might be some opththalmia following, but to let a man like that get into a bath with 6,000 or 7,000 children or other people it seems to me does not speak well for the hygienic measures that have been adopted for their benefit, and for that reason it seems to me that the measures adopted for the hygiene of the people should not be made public, they should be private. Let everybody have his own bath-tub. You can take a bath in a gallon of water if you want to, and you need not use any soap. If you get yourself wet all over and take a good crash towel and rub until you sweat a little you will get all the hygienic good that is to be had from a bath, and I really question very much whether it is a good thing for anybody when they take a bath to slather themselves all over with soap, because if we have any absorbents at all in our skin we are going to take up a little of that soap, and I question very much whether it is a good thing for us to take up what is in the soap very many times a week. I think that there is too much interference on the part of public boards of health to conserve the health of cities, and I hope before this session is over that I may have an opportunity to say something to this society about the encroachment of boards of health upon the private rights of the individual.

A SCIENTIFIC VIEW OF LIFE.

RICHARD E. TOMLIN, M. D., PHILADELPHIA.

It is well said "every age has its predominant thought." That of Greece was beauty, and she excelled in sculptured grace of statue and temple; that of Rome was power, and she conquered the world;

that of the XVI. century was reform, and states and religions were torn into warring factions; that of the XVIII century was liberty, and nations threw off the thraldom of empire; that of the XIX. century was progress, and rivers were bridged, mountains tunneled, discoveries of the telegraph, telephone, telegraphone, phonograph, wireless telegraphy, mental telepathy, and by the swift wings of electricity time and space were almost annihilated; XX. century that of accomplishment. This is the electrical age of the world, the age of magnetic marvels, the brilliant and golden age of opulence and electrical wonders. Science is only unified on systematic knowledge. Every fact is a scientific fact, every truth is a scientific truth, whether it pertains to so-called science, or to religion, or philosophy. The greatest accepted truths of science are but accepted theories incapable of absolute proof. The axiom, "every effect must have an antecedent cause," implies another axiom, "Effects are proportionate to their causes." It is a maxim of philosophy: "Evolution implied previous involution," and that the one equals the other. Paxson says: "Ideas go booming through the world louder than cannon. Thoughts are mightier than armies. Principles have achieved more victories than horsemen and chariots."

Kant says: "Man cannot think highly enough of man." He also states: "Give me matter and I will explain the formation of a world; but give me matter only and I cannot explain the formation of a caterpillar."

Agassiz says: "Man is the purpose toward which the whole animal creation tends from the first appearance of the paleozoic fish."

An eminent scientist has said: "All really scientific experience tells us that life can be produced from a living antecedent only."

Murphy says: "The Athenians who boasted that they sprung from the earth wore a grasshopper in their hair; in these latter days the grasshopper has evolved into a monkey, and some men seem to be proud of their ancestors."

President Hitchcock says: "There have been more changes in thought in the last thirty years than since the beginning of the world."

Murphy claims: "There is developed from man's spiritual being, by a law of evolution, an inner soul essence, which distinguishes man from the lower animals. In this inner soul of man God manifests himself and holds communion with his children."

Electricity, says G. W. Warden, next to Deity, is the most remarkable entity in the universe. Its marvelous and varied powers and utilities create a new epoch in scientific thought and discovery. It is the right hand of Deity, the tongue of the Spirit, the word of Omnipotent power, the protean cosmic force and creative machinery of the universe. It shaped planets and rounded suns, and hurled them forth to circle in the chorus of the singing spheres. It is the messenger and executive of creative will to all created things. It is the wonderful medium and agent by which mind acts upon matter and works the miracle of life and growth. Human life seems to throb, pulsate, gleam and glow in this marvelous current of existence.

This is an age of dominant mind, the development of a cycle of invisible forces. The past century was the age of matter.

It is said Darwin, Tyndall, Haeckel and Huxley did a work which had to be done. Their work was limited to chemical and biological demonstration. It was science, but science of the old school. The discoveries since made in the domain of electricity and mental transmission make their discoveries seem trivial in comparison. One of the greatest of modern discoveries is that heat is not a substance, but a sensation produced by electrical currents, and is not of itself life giving. Heat and cold are produced by electricity, and are sensations resulting from electrical conditions upon the molecules of which the body is composed. Heat and light are not things in themselves, but different sensations in our bodies or different effects in other bodies. (Langley.)

Loeb and Mathews (Chicago University) say that "Electrical charges in the atoms of the bodily tissues are responsible for all the active phenomena of life."

Hitherto it has been taken for granted by men of science that the food we eat nourishes us by furnishing the tissues of the body with heat energy. This, according to Professor Loeb, is all wrong. Instead of the food furnishing the muscle with heat energy it supplies electrical energy, which, after being converted into mechanical energy, is responsible for all the muscular contractions and organic processes of living organisms. Professor Serviss says: "This discovery of Professor Loeb and Dr. Mathews comes closer to the solution of life's mystery than physiologists have ever been able to approach, and is so fundamental and far-reaching as to warrant the

hope that we shall soon know what are the conditions and the limits of man's power to prolong his own life." The whole foundation of physiology and medicine may be reconstructed, and we may find that we possess a control over the phenomena of life more masterful than anybody has dared to dream.'

Dr. H. P. Pratt, an eminent electro-therapeutic expert, says: "Dr. Lobe's experiments have demonstrated that *electricity is life*, that the entire human organism is controlled by electrical forces. The twentieth century will prove electricity and not salt is the real life-giving principle. If this force is taken away life ends, and in the same manner if this force is supplied the result is the immediate stimulation of the organic life. The necessary elements of life are taken into the body through the air and food, and the entrance of the essential elements into the blood sets the human battery into operation, and it continues to operate as long as the electrical forces are supplied to the blood."

Warder says: "The human body is of elements the same as a magnet, and is built of smaller magnets or molecules." Man is the product of the perfect unfolding of nature's invisible electric laws, and aggregate atomic elements, and unites within himself all the elements and forces of the combined and harmonious universe. He is an epitome of the universe and an atom of deity. His form like all visible forms is only the temporal combination of material substances woven by invisible electric force out of invisible ether. The thoughts of a man's mind are the governing force of his organism. Sickness is the impairment of some of the parts or functions of the body by reason of its failure to get its supply of electrical energy. This may be caused by an injury to some of its parts, or by lack of proper air, foods and nutrition containing the electric properties required. For air is an electric element from the life-giving sun, and vegetable food is the embalmed rays of the sun, and animal food is vegetable food embalmed in animal organisms and brought one step nearer to electrical digestion, and both air and nutriment are necessary to supply vital electricity to the living organism. Man may live without food for forty days, but he cannot live without air for four minutes. The lungs are the great reservoirs of the body and take the electric current of the sun from the atmosphere as constantly and naturally as the electric wire takes the current from the battery or dynamo. Then it imparts electric

energy to the blood, and sends it as an electric current and fluid coursing through every part of the body, producing vitalizing life and growth, causing the heart valves to beat and the heart muscle to pump with marvelous power, the pulse to throb, and the whole machine to pulsate, thrill and whirr with life and energy. Flammarion says three-fourths of a man's life energy and nourishment comes from the air.

Nicola Tesla states that the time may come when man may learn to live on air alone, as do some kinds of vegetable and animal organisms. A man's strength and endurance is measured by the electric atmosphere he draws into his lungs and the fuel or food he takes into his stomach or boiler. A man's stomach bears a similar relation to the body that the boiler and furnace does to the machine, and should be treated in the same way. It should receive only the fuel necessary to its usefulness, and the ashes and debris should be cleaned out every morning before building a fresh fire as is done with every well kept furnace. The lungs take in pure electricity from the air, while the stomach takes in compound electric elements, vegetable and animal, and converts them by the electric process of digestion and assimilation into blood and bone, nerves and tissues, and the two functions give vitality and growth to the whole body. But the electric and controlling center of the bodily machine is the electric dynamo of the brain, to which is attached the spinal column with its nerve branches reaching out to all parts of the body, along which, as on connecting wires, the brain telegraphs its wish and will, and governs the whole organism. Here the mind or soul dominates the brain, and the brain dynamo dominates and controls the body. If you cut a nerve or otherwise obstruct or interfere with the electric current you cut off the electric control of the brain, and there is paralysis in the part of the body where the electric wires are disconnected. Consumption is a disease caused by a failure of the lungs to draw sufficient electricity from the air to supply the normal needs of the body. For lack of this energy the whole system becomes enfeebled, and finally dissolved. Indigestion is a failure of the stomach to supply the necessary energy to assimilate the food. In fact, all sickness, aches and pains is nature crying out for electric energy or vitality necessary for her to fulfill her natural offices and functions.

Dr. Jacques Loeb, of the Chicago University, announced on February 22, 1903, that he had discovered that muscular and nervous

diseases, such as chorea, paralysis, agitans, locomotor ataxia, insomnia, etc., can be cured by administering minute doses of calcium salts, because of their electrical effects. It is now claimed by eminent scientists that the different kinds of medicine by furnishing the positive or negative molecules needed by the body, restore the natural equilibrium and preserve life and health, and the failure to obtain these needed electrical supplies of life-giving energy, either by food or medicine, result in disease and death. Warder believes man has three bodies; first, the physical body, or organic aggregation of atoms; second, the invisible electric body, which weaves and organizes the atomic body; third, the real man, the spiritual body or soul, which controls the atomic body by means of the electric or astral body. These constitute one perfect organism, and in normal health and condition it is under the almost perfect control of the mind or spiritual body. Death is the separation of the physical and spiritual bodies. The art of longevity will be restored to the human race by supplying the electric energy necessary to maintain growth and vigor, renews its wasted tissue and preserve its organic power. It is a natural law that wherever there is life there is mind, and the nature of the mind changes with the nature of the life it occupies.

In the future man may not eat eleven hundred meals per annum, but a few mouthfuls of concentrated food daily, and an electric supply attachment adjusted to his body during sleeping hours may renew and rejuvenate his electric organism.

This is pre-eminently the age of mind and invisible forces, as the past century was the age of matter, and Francis Grierson says: "So far as we know electricty is the soul of form. What we call brain waves have an analogy to electric waves. We are being ruled by the seeming impossible, and the most successful inventors of the present day would have passed for madmen twenty years ago. The day is not far distant when science of the mind will treat material science as a plaything, and the psychic power of intellect transcend and brute force succumb to the soul force." With the divine powers of mind and electricity working for man the milliennium of a long and happy life will soon be here.

Who nobly does must nobly think,
The soul that soars can never sink;
And man's a strange connecting link
Between frail dust and Deity.

REPORT OF THE

SECTION OF HOMŒOPATHIC INSTITUTES AND CLINICAL MEDICINE.

A Case of Mercurial Deafness, by H. C. Allen, M. D.
Some of the More Common Skin Diseases, by Ralph Bernstein, M. D.
Sphymomanometric Determinations and Their Clinical Value, by W. A. Haman, M. D.
Kali Carbonicum in Nervous Dyspepsia, by A. C. Shute, M. D.

A CASE OF MERCURIAL DEAFNESS.

H. C. ALLEN, M. D., CHICAGO, ILL.

The chief object in reporting this case is to illustrate the necessity of constant care and the utmost vigilance on the part of the physician in the examination of a patient and in the construction of the anamnesis, on the correctness and completeness of which the selection of the remedy depends. Just here is the weak point in the armor of so many homœopathic physicians. Sufficient care is not taken in the examination, and the large majority, I regret to say, overlook the first and essentila duty of the homœopathic physician the making of a written record.

Under paragraph 83 Hahnemann says:

"The individualizing examination of a case of disease demands of the physician nothing but freedom from prejudice and sound sense; attention in observing and fidelity in tracing the picture of the disease."

How few of us ever approach a case free from prejudice. Unless we do, it is absolutely impossible to arrive at correct conclusions.

And again, in paragraph 104, Hahnemann says:

"When the totality of the symptoms that specially mark and distinguish a case of disease, or, in other words, when the picture of

the disease, whatever be its kind, is once accurately sketched, the most difficult part of the task is accomplished. The physician has then the picture of the disease, especially if it be a chronic one, always before him in his treatment. He can investigate it in all its parts and select the characteristic symptoms and compare them with the symptom list of the remedy."

"When the case is properly taken, under the rules laid down by Hahnemann," Dunham says, "any one can prescribe, for every one can select a remedy." And he might have added, unless the case be properly taken, no one, no matter how expert in materia medica or what his knowledge of symptomatology may be, can make a correct selection. The anamenesis should include both objective and subjective phenomena, and it is the former of these on which we wish to lay special stress in this case.

Hahnemann, in paragraph 4, says:

"He is likewise a preserver of health if he knows the things that derange health and cause disease, and how to remove them from persons in health."

CASE.—Mr. J. C. K., aged 26, brown hair, blue eyes, fair complexion, weight about 140. He is a salesman in a large wall paper house, the foreman of which, a patient of mine, referred him to me for his deafness, for which he had been under the care of three noted specialists for some years. He could hear a watch tick but one inch away from the left, and an inch and a half away from the right ear. He was discharged for his deafness.

In examining his throat I found the soft palate and pillars of the fauces reddened and œdematous, and the uvula more than twice its normal size.

On examination of his mouth I detected seventeen large mercurial amalgam fillings in his teeth.

The tongue was broad, flabby, and showed the impress of the teeth throughout the entire border.

He had suffered for years with ptyalism, saliva running out of the mouth and wetting the pillow in sleep. I sent him to a dentist to have the amalgam fillings removed, and, until the teeth regained a portion of their normal strength, to be replaced with cement.

From the symptoms elicited, the condition of the tongue, the throat, palate, uvula and profuse saliva, I gave him Mercurius dulcis in various potencies for the next few weeks, and in less than three

months the deafness was completely cured and he returned to his former occupation.

This case is only one among a large number that could be enumerated where the principal factor in the cure was the removal of the cause, and I report it to this society, especially to call its attention to a thorough examination of the mouth in cases of deafness.

INSOMNIA FROM MERCURY.

CASE.—Mr. J. G., aged 35, a tall, fair complexioned, muscular man, weighing 156, has been suffering five years from insomnia, and for the last year with a troublesome vertigo. He first thought it was induced by long hours in his occupation, which required attention sixteen or eighteen hours a day. But, after changing or curtailing the time, and doing no night work, the vertigo still continued. The uvula, soft palate and entire throat were red, congested, œdematous, and a profuse saliva called my attention, on an examination of the mouth, to the mercurial fillings of his teeth.

Vertigo when sitting or turning the head suddenly, as if in a swing; after stooping, when raising the head, everything turns black, with momentary loss of vision; unsteady in walking with constant fear of falling; has several large amalgam fillings in his teeth. Further questioning elicited the fact that the insomnia and vertigo began coincidentally with the filling of the teeth.

The amalgams were removed, and in three weeks the vertigo and insomnia disappeared, and he considers himself well. Mercurius dulcis was his remedy.

CHRONIC BILIOUS ATTACKS FROM MERCURY.

CASE.—A. J. C., aged 50, dentist, brown hair, fair skin, hazel eyes, weight 165; extremely susceptible to weather changes for years. Mother had bilious attacks for years, and died aged 80.

Heart intermits every third or fifth beat.

Megrim preceded by blurred vision.

Bilious attack preceded by drowsiness; knows one is coming because he is sleepy: a large, flabby tongue, with imprint of teeth on border.

Backache on rising.

Nausea for many days, every five or six weeks, following bilious attacks.

Had typhoid fever in 1895, and has never felt well since.

Although a dentist, he had thirteen large mercurial fillings in his teeth, which were removed, and under Mercurius dulcis, followed by Psorinum, chronic attacks of biliousness that had lasted for years were entirely removed.

SOME OF THE MORE COMMON SKIN DISEASES; THEIR DIAGNOSIS AND TREATMENT.

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It is my pleasure at this time to present a paper upon some of the more common skin diseases. I shall not enter into histopathologic detail, nor shall I attempt to be ultra scientific, but shall limit myself mostly to diagnosis and treatment. I shall begin with a general consideration of diagnosis and treatment, and will then present in their order the following dermatoses: Scabies, impetigo contagiosa, urticaria and rhus poisoning and its congeners, acute vesicular eczema and erysipelas.

Let me begin, then, by stating that the majority of skin lesions are more or less difficult to diagnose, especially when one does not have the advantage of seeing large numbers of clinical cases. In order that we might be better enabled to correctly diagnose dermatalogic affections I shall mention a few of the factors which will be of assistance to us. Let us always remember that we can only hope to come to successful conclusions by the most careful observations, the closest scrutiny, and assuming always that our patients often play the part of consummate actors and actresses, frequently leading us far astray, so that we in turn must ever be alert, and in the words of one of our eminent dermatologists, "We must with a gentle, courteous and sympathizing manner combine the art of a detective and the skill of a swordsman."

The question of light and heat in the examining room will be our first consideration. Under no circumstance is artificial light to be

used, direct sunlight is likewise to be avoided, for they both give unnatural tints to the skin. Abundant daylight, then, is an essentlai factor in the proper examination of the diseased cutaneous surface. A temperature of about seventy degrees should be maintained, for above or below this point modifications of the color of the skin often take place. This is particularly so in the erythematous conditions, whether specific or simple in nature.

It is of paramount importance to make a complete and thorough examination of the entire cutaneous surface at the patient's first visit, for by the time of the second visit the eruption may have lost its characteristic appearance. The general color of the skin should be noted, it should as well be felt, so that its softness, harshness, or induration might be determined, whether it be dry or oily, etc.

Odors should always be noted, for they often assist us in a diagnosis; I refer especially to the mouse-like odor of favus, the offensive odor in bromidrosis, the ammoniacal odor in uridrosis, and the characteristic odor in syphilis and small-pox.

The age of the patient is always to be taken into consideration, for it is known that certain diseases occur at certain periods of life. One would hardly look for tinea tonsurans in an adult, or for psoriasis in an infant; acne seldom appears before puberty, and epithelioma usually about the fortieth year, yet it has been seen earlier.

The condition of the health is not to be overlooked, and this must be gone into thoroughly and concisely, because it is a recognized fact that many dermatoses are often secondary to some internal disturbance. Therefore, it is quite essential that careful inquiry should be made into the state of the digestive tract, the genito-urinary tract, the bowels, and the tongue and buccal membranes. In such conditions as general eczema, furunculosis, urticaria and psoriasis, it is of great importance to make a urinary examination. In fact, this should be done in any extensive inflammatory condition; too much stress cannot be laid upon this point.

The patient's occupation should always be elicited, for we know that morocco, metal and chemical workers, cooks, dish washers and scrub women are all prone to many varieties of dermatitis.

The question of duration naturally presents itself, and with this knowledge in hand we have gained much towards a diagnosis. We must know whether the condition is acute or chronic, because it tells us much; take, for intsance, impetigo contagiosa and eczema, which

frequently simulate one another closely; if the duration has been for more than a week or two with no tendency to subside, it is probably eczema, if of one or two months' duration it is certainly so. Psoriasis and the papulo-squamous syphiloderm may likewise be differentiated; if the eruption exists for more than several months the diagnosis of syphilis becomes less probable, and if it has existed for more than a year it is absolutely excluded.

Lastly, I should like to lay stress upon the magnifying glass as a most important factor in the diagnosis of cutaneous disease, for many a diagnosis has been made clear by its aid. One of the hand glasses with a lens about three inches in diameter usually suffices. The presence of certain animal parasites and their ova, the distinctive diagnostic features and finer points which would otherwise escape unobserved, can thus be plainly brought into view.

I shall now take up the general consideration of treatment in skin affections, limiting the same to means entirely within the range of the general practitioner. Naturally the first and most rational object in view would be the removal of the cause, since many dermatoses are frequently aggravated by internal or constitutional disturbances; it is quite natural that such disturbing factors should be remedied ere one could possibly hope to cure or even improve a cutaneous disease. It is freely admitted by many authorities that faulty metabolism, intestinal auto-intoxication, lowered vitality and neurotic ditsurbances are in part accountable for various dermatologic affections, and yet many ignore these facts and likewise ignore internal medication, relying entirely upon topical treatment to elicit a cure. I quote from Bulkley: "He but poorly serves his patient who prescribes only a local treatment without going fully into the case and rectifying, as far as may be, the systemic errors which often play a most important part in the production and continuance of an eruption." I, therefore, wish to make a plea for more careful study of diseased cutaneous conditions, with the view of locating the cause, and for the constant administration of the properly indicated Homœopathic remedy.

The question of diet is not to be ignored in the treatment of the diseased integument. That skin diseases are greatly benefited by an appropriate and properly regulated diet is not to be denied. Faulty digestion is very frequently responsible for skin eruptions, either directly or indirectly, so that it is of the utmost importance

to regulate the diet. Food should always be proper in quality and quantity. Starches and sugars are, as a rule, to be avoided in the majority of dermatoses, for they tend to produce perverted metabolism and gastro-intestinal fermentation, and according to Lassar, in a most excellent article on the "Dietetic Treatment of Skin Diseases," in the Dermatologische Zeitschrift, No. 3, the excess of sugar in the tissues affords a fine culture media for pyogenic germs. The majority of the vegetables are not to be denied, with probably the exception of potatoes, tomatoes, parsnips and the heavier root vegetables. Among the permissible cerals might be mentioned rice, whole wheat and hominy; oat meal seems to disagree with many patients, so that it is usually to be avoided. Plenty of pure, cool water is desirable, to be taken between meals only, a glassful each hour, beginning an hour after meals and continuing up until an hour before the next meal; a cup of hot water sipped slowly, night and morning, is often of benefit. Meat and egg diets are to be regulated as the case may need, constantly bearing in mind that they are both often taken excessively, and are thus apt to produce imperfect nitrogenous metabolism. Such foods as oysters, clams, crabs, lobster, certain fish, pork, etc., and foods that are apt to deteriorate rapidly are to be avoided by susceptible individuals. It is true that many can take these foods without the slightest evidence of disagreement, and yet have severe attacks of urticaria. Often it is true idiosyncrasy to these or other foods, which is explanatory, but in such cases the effect is, as a rule, constant, and not occasional. Foods of too stimulating a nature, such as cheese, pastry, veal, spices, pickles and excessive quantities of tea and coffee are not to be allowed. Cocoa and chocolate are likewise to be avoided, for in many instances they seem to interfere with the normal metabolic process. Milk is the ideal diet, and seems to agree best when taken on an empty stomach, at the body temperature, and sipped slowly, about an hour before meals, Bulkley contending that at this time the stomach is alkaline, and as the milk is alkaline, it is absorbed directly into the circulation. Too much stress, then, cannot be laid upon the diet; let the rule be a proper diet both in quality and in quantity, at the proper time, eaten slowly, and masticated carefully with little fluid.

The proper amount of rest, exercise and bathing are all to be regulated as each individual case may seem to need, bearing in

mind that bathing can very easily be overdone, and to many patients is quite harmful.

In conclusion of the general consideration of diagnosis and treatment, I would like to state that of just as much importance as the elicitation of the cause, the internal and topical treatment and the regulation of the diet and hygiene is the insistence upon the carrying out of directions and routine. Human nature is at times peculiar and frivolous; at first while the patient is imbued with the new order of things, and with the hope that he will soon be rid of an annoying dermatosis, directions are faithfully carried out and the prescribed routine carefully followed with good results; but alas! soon the enthusiasm begins to wear off, the interest begins to wane, and ere we are aware our patient is back in the same old rut, and then we wonder why improvement ceases. To overcome just such tendencies on the part of our patients it behooves us to constantly question them closely on every detail, to question them definitely and to question them concisely, and by all means to see them often, for in this way, and only in this way, can one hope to have any measure of success. True it is that the patient will squirm under such constant cross-fire, will certainly try to evade the necessary questions, and would rather be left peacefully alone to follow the trend of his own likes and dislikes. Keeping everlastingly at them, then, is one of the keynotes to success in dermatologic practice.

We are now ready to take up the discussion of some of the more common skin diseases. Scabies will be our first consideration. It is to be regretted that such a prevalent disease so frequently remains undiagnosed, and just as frequently remains uncured, patients traveling from one physician to another in search of relief, until finally they are driven to our dispensaries where they are quickly cured.

Scabies, or the common itch, at times is quite easy to diagnose, and yet again there are cases which are more or less difficult. I shall consider the lesions in their order as produced upon the hand, wrist, elbow, axillæ and penis. While lesions are to be found upon the abdomen, buttocks, inner surface of thighs, legs and between the toes, in these locations they are not quite as characteristic as those to be observed in the before-mentioned regions, so that I shall limit myself to a discussion of these parts with the hope of making the matter of diagnosis of this annoying dermatose somewhat clearer.

The predominant symptom of which the patient complains is the intense itching, always worse at night, due, of course, to the activity of the itch mite, the acarus scabiei, which is a noctambular parasite. The disease usually develops in two or three weeks after nocturnal bodily contact with persons similarly infected, or by sleeping in bed clothes in which the parasite abounds. The disease, as a rule, is not contracted by the mere shaking of hands, nor is it to be found upon the face and neck, except occasionally in infants, contracted from the mother's breast while nursing, which is a point well worth remembering. The female parasite itself may at times be discerned by lifting it out of its burrow with the aid of a fine pointed needle, appearing as a white shining globule, not much larger than the pin point itself. The parasite is to be found at the end of the cunuliculus, which appears slightly raised with a grayish speck beneath, and may be examined beneath the microscope without staining, by simply immersing in a drop of Canada balsam. The chief characteristic of the eruption is its multiformity, consisting of vesicles, excoriated papules, pustules, scratch marks, and is frequently contaminated with impetigo and eczema. Upon the hands and wrists the condition is decidedly characteristic, appearing especially between the fingers as numerous vesicles and scratch marks. Here are to be found the burrows, especially on the lateral surfaces of the fingers. The burrow usually consists of a narrow gray line, tortuous in its course, usually varying in length from an eighth to a half an inch, often having a vesicle at its end or a slight grayish elevation, marking the site of the acarus. A hand magnifying glass often assists in locating the burrow. Sabouraud offers the ingenious suggestion of applying ink to an infected region, especially in cleanly persons on whom the parasite is hard to discern. The burrows are filled with ink by capillarity, the excess is wiped off, and leaves the burrows standing out quite prominently. It is to be remembered that scabies in this region attacks as well the palms of the hands. On the wrists, especially at the folds, on the flexor surfaces, may be seen typical lesions, vesicles, infected and non-infected, burrows running transversely, and numerous scratch marks. The bend of the elbow usually does not show burrows, but instead first presents numerous scratch marks followed later by secondary infection and vesiculation. Likewise at the axilla burrows, as a rule, are not to be seen, scratch marks here seem to be most predom-

inant, usually at the anterior fold, on a line with the seams of the under garments. The penis is a favorite seat for the scabies lesions, both upon the shaft and glans of the organ, appearing as red papules and occasionally associated with vesicles and burrows. To recapitulate: The diagnostic features of scabies are:

The presence of the burrow with its itch mite.

Intense itching, worse at night.

Absence of lesions on face and neck.

Occasional presence of lesions on face in nursing infants.

Presence of lesions about nipple in the female.

Presence of lesions upon the shaft and glans of the penis.

Characteristic lesions to be seen between the fingers and at the flexures of wrist.

With reference to the question of differential diagnosis, I should like to state that it is of utmost importance that an error should not be made, for the strenuous treatment needed in this condition would soon play havoc with some of the more acute dermatoses with which it might be confounded. Eczema in its early stages is frequently seen on the hands and has been mistaken for scabies; in eczema the vesicles are not as conical in shape and are apt to be more closely aggregated, the discharge is of a more watery character, and does not tend to become sero-purulent, except perhaps in the impetiginous forms. The eruptions of eczema, impetigo and syphilis may coexist, and greatly alter the true appearance. The chosen treatment, however, will, in the course of a few days, tend to relieve the scabies or an associated impetigo, while other conditions would be aggravated or not affected at all. If there is any one other condition which, as a rule, is diagnosed as scabies, especially in infants and children, it is the itching dermatosis of Bateman. I refer to lichen urticatus or papular urticaria, which is usually to be seen during the earlier years of childhood. It differs from scabies, especially when upon the hands and wrists, in the fact that it begins as an urticaria, the lesions being rather small and frequently decidedly papular in character. As a rule, when the patient is brought to the physician the disease is usually well developed, making its diagnosis from scabies all the more difficult. In this well developed stage it presents rather pale red papules with scabbed tops, usually upon the hands and limbs although the face and body are frequently the seats of lesions. Minute disseminated vesicles occur here and there

with occasionally a pustule, infected by scratching, as the itching is intense. There is a tendency for the papules to become linear, following one another closely, probably along the line of a scratch mark. As old lesions disappear they leave behind a dark spot, and frequently the older papules appear to be quite flat upon their surfaces, and if held at a proper angle with the light, they appear to be quite shiny. The duration at times is quite long, usually better in the winter time, only to recur when warm weather sets in again. The main points of differentiation from scabies are the absence of burrows and the itch mite, absence of lesions on the penis, occasional presence here and there of wheals, with an occasional antecedent history of urticaria, tendency of papules to become flat and shiny, recurs in summer time, itching usually worse in the daytime, and is not rapidly responsive to treatment. Its resemblance to scabies is mostly in its appearance.

Treatment naturally resolves itself into three factors, namely, the removal of the cause, the relief of the associated dermatitis, and the increase of the resistance of the integument. The first factor resolves itself into the death of the parasite; this necessitates the use of a parasiticide, and sulphur, happily, is the specific. Not that sulphur should be used in every case, for there are sensitive and tender skins, especially in infants and children, which cannot stand such strenuous treatment; in such cases styrax may be used; care, however, must be taken, for if too freely used it has a tendency to irritate the kidneys. Sulphur on account of its odor is frequently objected to in private practice, so that naphthol may be used, which likewise has a tendency to irritate the kidneys. Crocker, however, contends that he has never seen "any bad effects" follow its use. I shall give you the routine of treatment followed in the skin section in the dispensary of our own hospital here, and in the department of skin diseases in the dispensary of the West Philadelphia General Homœopathic Hospital. Firstly, the patient is advised that treatment will be useless unless all infected members of the family are treated. The treatment is divided into five nights or periods. On the first night or period the patient is advised to take a hot bath, entire or local, depending on the extent of the infection rubbing the body thoroughly with a mild soap if the skin is sensitive and tender, sapo viridis if the case is an old and chronic one. The object being to remove the epidermal layers, open the pores, and at

the same time expose and destroy the burrows containing the parasite and its eggs. The patient is then directed to thoroughly rub in a 20 per cent. sulphur ointment (sulph. precipitat. 20 per cent.; base. adipis rectificati), and to retire in an old suit of underwear. For three succeeding nights the patient continues to rub in the sulphur ointment, the hot bath as advised on the first night being omitted. Then on the fifth night another hot bath with thorough friction is taken, the under clothes and bed linen are boiled, while the cloth garments are either baked in the oven or well ironed; on the next day the patient reports for further treatment, and is usually cured. If not, another course of treatment is prescribed, which usually suffices, yet at times three treatments have been required. There are two facts to be borne in mind, namely, under treatment and over treatment, the former resulting in a non cure and the latter in complications, which, however, sometimes occur pari passu with the mildest of treatment.

I shall next consider these complications and how to meet them. Firstly, it should be remembered that the itching does not always desist even when the parasite has been entirely destroyed for in many cases the nerves remain irritated for a long time, the itching consequently persists. Frequently hypochondriacs will disbelieve that they are cured, and will continue to itch, occasionally folliculitis of the thighs will result from too strenuous treatment with the sulphur ointment, and remains an annoyance for a long time. The latter condition is usually relieved by a few local applications of a dilute solution of liquor carbonis detergens. Secondary eczemas and erythemas are usually controlled with a 10 per cent. boric acid ointment or lotio calaminæ. For the persistent itching without other complications, alkaline baths or any of the milder antipruritics are advisable.

Lastly, I shall speak of the indicated remedy, because I do believe that the patient should have the benefit of its ameliorating properties, and its tendency to assist in making conditions more favorable for a speedy cure, although this is purely a parasitic disease.

Sulphur 6x presents itself especially in those cases which tend to chronicity and recurrence, when the patient is thin and weak and irritable, there are swollen glands, itching is marked and worse from warmth, marked burning and soreness from scratching.

Psorinum 6x. Patients have aggravation before midnight from the warmth of bed clothes, tendency to tear the skin with the finger nails, subjects are weak and fretful, offensive odor of cases which have been neglected.

Merc. vivus 3x. Pustules form rapidly, with offensive secretions; patients are debilitated and cachectic, worse from exercise and at night, and from warmth of bed, better from rest and during the day.

Impetigo contagiosa will next receive our attention. This is one of the more common dermatoses, and is usually seen in children and infants, and occurs in adult life as well. The eruption is mostly seen upon the face and hands, yet any part of the body is apt to be infected. The disease has its beginning as small, flat, discrete vesicles containing a serous fluid, which, in the course of twenty-four hours, become pustular by secondary infection. Rupture soon occurs, followed by the exudate drying upon the skin as thin, wafer-like scabs which have a characteristic "stuck-on appearance," and are yellow in color. These crusts seem to be very loosely attached, the edges tending to curl up and drop off, leaving behind a reddish exuding base. Very frequently nothing else is to be seen, a patient presenting a face covered with from fifteen to twenty such spots, the scabs having ben removed, or having dropped off on their own account. The vesicular or vesiculo-pustular lesions very frequently show a decided tendency to central depression or umbilication. The infection is a streptococci one, the secondary suppuration resulting from staphylococcic infection, the disease, therefore, is highly infectious, often spreading with great rapidity among the inmates of orphanages and asylums. Itching is frequently slight, and often wanting; in very severe forms there may be febrile disturbance. Impetigo may likewise be seen affecting the conjunctiva, nostrils and the commissural folds of the lips. The affection often undergoes spontaneous evolution, clearing up in about two weeks. Duhring has given the name of impetigo simplex to a form which differs from the type just described, in that the lesions do not appear as vesicles, but are primarily pustules. When fully distended they are globular in form, whitish yellow in color and about the size of a pea. They do not tend to coalesce, nor umbilicate; this form is presumed to be non-infectious.

The diagnostic features of impetigo contagiosa then are, super-

ficiality of lesions, discreteness, scabs are thin and stuck on, yellowish in color, edges have a tendency to curl up and are autoinoculable.

With reference to differential diagnosis it must be remembered that impetigo contagiosa in its early stages may be mistaken for varicella; this error, however, may be avoided by bearing in mind that the vesicles of varicella are usually more or less distributed over the entire body, not being limited to the face as impetigo frequently is; there is an absence of coalescing and tendency to crust; it must also be borne in mind that impetigo contagiosa may coexist with varicella, the vesicles becoming secondarily infected.

From the impetiginous form of eczema impetigo contagiosa is often with difficulty diagnosed, as both conditions simulate one another closely; Sabouraud contends that this form of eczema is merely one which has become secondarily infected with streptococci.

Treatment demands the destruction of the infecting micro-organism, prevention of further auto-infection, and the necessary internal medication to increase the resistance of the integument and favor an earlier cure.

Unguentum hydrarg. ammoniat., 10-20 per cent., rubbed thoroughly into the infected areas four times daily, gives the desired results, the scabs having previously been removed with warm water and soap. Washing the surrounding skin three times daily with any weak antiseptic will prevent further infection.

Among the internal remedies to be considered are:

Calcarea phos. 6x. Symptoms worse after coming in contact with water, in the late stages when there is a tendency not to heal.

Kali bichrom. 3x. Aggravation from pressure and in hot water; better in cool weather, and when coexisting with hepatic rheumatic, urinary and catarrhal conditions.

Antimonium crudum 3x. Useful in peevish and fretful children; lesions are superficial, crusted, suppurative; lesions about mouth and nostrils, with painful cracks at the corners; tongue white and coated.

Antimonium tartaricum 3x. Large painful pustules, with heavy yellow crusts; there is numbness and itching.

Cicuta virosa 6x. When lesions tend to spread, children with neurotic tendencies, pea-sized lesions on hands and face becoming sero-purulent and forming honey-colored crusts.

Natrum sulph. 3x. Pustules filled with yellowish fluid, which dry into yellowish crusts, children who live in damp cellars or rooms.

Picric acid 6x. In debilitated children who tire easily, seropurulent exudation which dries on face as thin semi-transparent scabs.

Viola tricolor 2x. Especially in scalp conditions; pustules on face and scalp; on scalp secretion is gum-like, mats the hair; crusts have a tendency to crack; cases seen in winter; glandular swelling.

I shall now consider urticaria. Let me begin by stating that it must always be borne in mind that all urticarias are not caused by dietetic errors. While this is the usual thought which flits through one's mind in seeking for a cause, it is to be remembered that medicinal substances are often a causative factor; among those to be mentioned are quinine, cubebs, copaiba, salicylic acid, morphine, turpentine, chloral, etc. Substances which produce toxæmia are often responsible for urticarial attacks; they may do so primiarily or by putrefactive changes while in the bowel. Again, it is to be remembered that many foods and substances which do no harm to the ordinary individual, will act as poisons to others. Worms in children will often cause an attack; genito-urinary disorders, rheumatism, malaria, asthma and the eruptive fevers will all often be associated with an attack of urticaria. The gouty diathesis, fear and anger, in fact, mental emotion of any type, will frequently produce urticarial eruptions, so that it is of the utmost importance to look much farther than the mere question of an indiscretion in diet as an etiological factor. Dermographism, or the production of wheals upon the body surface by artificial means, is not a true diagnostic factor of urticaria, for it is known that subjects of dermographism are not usually subjects of urticaria other than that produced artificially.

The urticarial lesion usually appears suddenly as firm, pinkish or whitish elevations, surrounded by a red areola, and are known as wheals, the size varying from a pea or bean to that of a large blotch. They are usually irregular in shape and often linear; any portion of the body is subject to attack, including the mucous membranes of the mouth, nose and throat. There is marked stinging and itching. Febrile disturbance may accompany an attack, occasoinally reaching as high as 103 and 105 degrees. The disease may be acute, disappearing in the course of a few days, or may become chronic, often lasting many years. There are many forms or varieties of this

disease, among those to be mentioned are urticaria papulosa, tuberosa, hæmorrhagica, bullosa and gangrenosa. Pigmentary urticaria is not considered as a true urticaria by Sabouraud, he contending that it is a decidedly papular disease.

Diagnosis, as a rule, is not difficult, frequently the patients will announce the ailment of their own accord. Erysipelas of the face may at times be somewhat confusing; there is more marked redness, constitutional disturbance is greater, there is usually a line of demarcation, the swelling is more diffuse, there is a tendency to vesiculation, and the duration is longer.

It is not to be forgotten that the cimex lectularius has more than once been the cause of a supposed attack of urticaria, it is always well to have the bed clothing looked over, especially when the lesions are found in groups of three or four; a central point is at times to be seen marking the point of the insect bite.

Treatment demands that the cause, whatever it may be, should be persistently sought for. If due to an error in diet, and the case has been seen early, an emetic is needed to empty the stomach of any irritating substance. The bowels are likewise to be emptied, the indicated remedy is to be given, and to control the intense itching a one or two per cent. carbolated or mentholated vaseline may be used. Alkaline baths likewise are of service. It is often a mistake to put urticarial patients upon a milk diet on account of the fact that all patients cannot tolerate it, toxic products of indigestion often resulting from its use.

Probably the most called for remedy is Apis (3x). It is especially indicated when the symptoms are worse from heat, the sensations are more of a stinging nature than itching; there are burning pains, and the tendency is to form blotches.

Rhus tox. 6x. Patients are better when they move about, the sensations are more itching in character, and are relieved by cold; there is marked swelling of the skin, often associated rheumatic pains; attacks occur after exposure to wet and cold.

Urtica urens 3x. When due to shell-fish or some food for which there is an idiosyncrasy.

Hepar sulph. 3x. Especially useful in chronic cases, there is sensitiveness to cold air and sharp sticking pains; great sensitiveness of the lesions. Among other remedies to be considered are

Ledum, Aconite, Bryonia, Opium, Rumex, Sulphur, Terebinth, Dulcamara, etc.

I shall lastly speak of poisoning due to the several plants of the rhus species so common to our own country. The symptoms usually develop a few days after contact, occasionally in a few hours, and then again a week will elapse ere manifestations will present themselves. The fingers and hands are usually the first to be affected, soon spreading to the arms and face and frequently involving the genitals and nates. An erythema may be the first manifestation, with more or less swelling; there is intense itching, which is soon followed by a vesicular eruption. Bullous lesions may coexist, often denuding large areas of the skin, leaving a raw, inflamed surface. The disease will, as a rule, run its course in about two weeks, yet there are obstinate cases which defy treatment for a long time, these forms are often followed by and have associated with them an acute eczema. Secondary attacks at times occur, the patient having all the symptoms of the original attack, without re-exposure. Crocker accounts for these secondary attacks by the remaining beneath the skin of small whitish deposits at the time of subsidence of the original attack. Maisch, of our own city, holds toxicodendric acid, the poisonous principle of the rhus species, responsible for this disease, while E. H. Smith, of Santa Clara, California, holds a germ responsible.

A differential diagnosis between rhus poison, acute vesicular eczema and erysipelas is at times quite difficult. The history of exposure, the distribution of the eruption, and the regions affected, are always to be considered. In eczema, as a rule, the vesicles are smaller than in rhus poisoning; for in this condition they are larger and usually associated with many blebs, and at the same time there is a tendency of the vesicles to appear in linear streaks. Erysipelas, beginning at a point, spreads peripherally, with a well defined border; the inflammation is more deeply seated, involving the subcutaneous tissues as well. The sensations in erysipelas are rather those of fullness and burning than itching. The character of the discharge is different from either that of acute eczema or rhus poison, being more serous than watery, there are also constitutional disturbances and fever.

With reference to treatment it would seem quite rational that the proper thing to do would be to neutralize the acid poisonous prin-

ciple which is presumed to be the cause of the disease. This is usually accomplished by the use of a solution of sodium hyposulphite, yet Hyde and Montgomery cannot see how such a procedure would tend to do good, as they contend that "it is difficult to understand how such neutralization can control the inflammatory process after its onset; they further contend that alkaline solutions should only be considered with a view of prophylaxis.

In the Pacific Medical Journal for March, Dr. E. S. McKee recites his own personal experiences as a sufferer from rhus poison; after trying many remedies he found most relief in a solution of 53 per cent. alcohol, 47 per cent. distilled water and sufficient lead acetate to make a saturated solution. The doctor found relief from this solution within eight hours, and states that if he were poisoned again he would wash the parts with a dilute solution of alcohol to dissolve and remove the poison. At the West Philadelphia General Homœopathic Hospital Dr. Hyzer, the resident physician, and myself treated a series of cases this summer with Dr. McKee's solution, a saturated solution of sodium hyposulphate, and Duhring's solution of fluid extract of grindelia robusta (one drachm to four ounces of water). All three solutions were kept constantly applied on different affected parts of the same individual. Our conclusions were, that Dr. McKee's solution was ideal in the very early cases. When they are a day or two old this same solution does no better than the other solutions in the older cases. Just as good results were obtained from the saturated solution of sodium hyposulphite as from the solution of grindelia robusta.

The larger blebs and vesicles should be opened and the contents gently pressed out, care being taken not to destory the covering. Once a day the infected parts should be cleansed with warm water, the part lightly dried and treatment resumed.

Internal medication is not to be neglected.

Croton tig. 6x. The vesicles are very small and itch terribly, with a tendency to form pustules, which dry into yellow scabs, the vesicles tend to become confluent.

Cantharis 3x. The sensations are rather those of smarting and sticking than itching, worse from warmth and at night, better from cool applications.

Rhus tox. 6x. Sensations are itching and burning, marked ten-

dency to spread, worse from cold and wet weather, at night and from light scratching, better while moving about.

In the preparation of this paper the writings of the following authors have been freely consulted: Dearborn, Lassar, Mracek, Duhring, Sabouraud, Crocker, Hyde and Montgomery, Bulkley, Shoemaker, Stelwagon and Jacobi.

DISCUSSION.

Dr. E. M. Gramm: If there is no one else to say anything on this paper I think it is of sufficient importance to warrant a little discussion. There is food for thought in many directions in the ideas the doctor expresses. A fact, which is found, I think, more by dermatologists than by general practitioners, is that the ascertainment of the cause of many cases of skin diseases is quite difficult. That seems paradoxical and yet it is not. The majority of patients who come to a physician who makes a specialty of dealing with diseases of the skin come with the idea that those skin diseases can be treated independently of any other condition that exists within the system, and over and over again very intelligent patients have come to me and I have inquired as to other conditions, stomach conditions and conditions that were far enough away from the skin. Many of them would say there was absolutely no condition of which they could complain. How are you going to find a cause when they tell you that? Many of them tell you that, and their statements are not true. I remember particularly one case of acne rosacea in a woman whom I treated for quite a length of time. I generally explain to my patients it is necessary to know the whole truth concerning their condition, not only the condition of the skin, but everything that may ail them, and I explained to her very carefully that anything that might be the matter with her was a matter I should be informed of. She said nothing else was wrong, she felt well in every respect, and I treated her with the usual result, that is, none, and after treating her for quite a long while she stayed away possibly for six or seven weeks, and when she came back I chided her, and told her if she wanted to get well of as obstinate a condition as acne rosasea she must stick to the treatment. She said, "Well, I had one of my regular attacks." I said, "Your regular attacks." "Yes." "What kind of attacks do you have?" She said, "I have

an ovarian trouble." I said, "Let us read your record when you first came in. 'Nothing else the matter only your face.'" She said, "I didn't come to you for treatment for anything but my face." How will a dermatologist find the cause in such a patient? They come to us to be treated for the skin and nothing else, and they consider if they tell us all concerning that they have told all it is our business to know.

The causation of skin diseases to me is certainly decidedly obscure, and I feel that we have not reached an explanation. If you will take any work on dermatology and run over the diseases page by page, when it comes to causation you will find that anæmia, chlorosis, uterine diseases, dyspepsia and constipation are given as causes of practically all of them possibly, with the exception of parasitic diseases. In other words, the dermatologist does not know. We have not discovered the method of production or the reason for the existence of skin diseases. Why should dyspepsia produce a skin disease? Why is it a man has a most abominable heart-burn, as patients say, for years and never shows the first sign of any eruption? Another person who absolutely has an apparently perfect tongue, who seems to have an absolutely perfect digestion, has a skin trouble. Of course, there we can often discover by examination of the stomach contents or examination of the fæces that digestion does not go on properly, that the chemical changes that go on in the stomach and intestines are not being made with the regularity and propriety that leads to the formation of their normal end-products. That should incite us to ascertain as nearly as possible the exact condition from which the patient suffers. If a patient comes to us for skin trouble he should be examined from head to foot, organ by organ, and in many cases you will be surprised to find the lowered vitality, which allows a skin disease to develop, produced by a disease in one or other of the organs.

So far as rhus or plant poisoning is concerned, we have in this climate so many cases of poisoning by various plants in the summer time that numerous remedies have been recommended. Personally, I think that it is a very great mistake to use the concentrated and powerful local applications that are, as a rule, recommended. The subgallate of bismuth is a substance that answers remarkably well in a great many cases of plant poisoning used in the form of a

powder where there is marked vesicle formation, and when the vesicle formation is on the decrease then used as an ointment, in the case of a powder a drachm to the ounce of powdered corn starch, or from twenty to sixty grains to the ounce of petrolatum, if you use it in the form of ointment. I do not mean to say we do not need internal remedies. We certainly do need internal remedies. You cannot cure your cases unless you use internal remedies.

After all, the classification of the various skin diseases is absolutely arbitrary. We have sick people to deal with, we have not diseases of the skin to deal with, and we should certainly think of that fact when we examine our patients and when we prescribe for them, and this idea of limiting the prescription to a few stock remedies that are recommended in the text-books is the greatest mistake that can possibly be made.

When you come to the therapeutic application of your remedies never examine the patient for the symptoms manifested by the skin disease. You will find that right side or left side, above or below, vesicles or crusts or scales, depend entirely on the evolution of the disease, on the stage in which you see the disease, and the systemic condition, the condition which is evidenced by systemic symptoms is the condition that should be prescribed for, and we should not limit ourselves by any means to the lower potencies.

Dr. Z. T. Miller: I would like to ask the writer of the paper whether it is possible to cure a skin disease without local applications, and what is the possibility of setting up the condition in the organism by local treatment that Samuel Hahnemann calls psora?

Dr. Bernstein: I believe some skin diseases can be cured without local application. I believe the province of the local application is simply to ameliorate the condition or relieve the patient. I feel we shou'd not leave a patient who suffers intense itching to wait upon the remedy to cure them. They have to wait a long time in chronic conditions. I feel a local application should be used to relieve in such cases.

Dr. Miller: It seems to me I have read somewhere that sulphur, or, in fact, any local application to a skin disease is a very dangerous thing, and that it is better to let the patient suffer a little and have him benefited remotely than it is to suppress a skin disease and have innumerable complaints follow afterward.

Dr. Aug. Korndœrfer, Sr.: In regard to our friend Miller and

the writer of the paper and their questions, I would like to say that I do believe it is possible to cure most of our skin diseases without local applications. I think, however, that we sometimes fail to reach such cures for two reasons: one, our inability to grasp the true meaning of our materia medica; secondly, our inability to apply our drug therapeutically as exactly as we should, and by reason of not yet having sufficient drugs at our command to cure all forms of such skin diseases. When we have reached a greater degree of perfection in our prescribing I think we will do away with all local applications. Personally, I may say that I have done away with all local applications in the treatment of skin diseases. It is a very rare occurrence that I use any medicinal drug application to any form of skin disease. Take rhus poisoning. We hear so much about the absolute necessity for applying something to neutralize some poison that is upon the skin, that has been applied to the skin, by which the disease has been developed or the poison has been developed in the system. I have patients who tell me that they only need to pass on the other side of the road when the wind happens to be blowing from the poison ivy, and they may not have been within twenty feet of it, and yet at the same time the face and hands will be quickly affected, in twenty-four hours they will be itching, in thirty-six hours afterward they will have vesicles forming, and they will go through a regular siege. I have cured some of those people sufficiently well so that they do not seem to suffer from the same exposures that they formerly did, and I have not used any local applications at all. In some cases I have not been able to eradicate the tendency to the poisoning, the tendency to be readily affected, that peculiar sensitiveness to that particular poison. That idiosyncrasy I have not been able to eradicate. So far as treatment is concerned, in an infected case where the patient seems otherwise in good health I have not yet found any remedy to stand me in the stead of croton tiglium in the thirtieth potency. The writer of the paper has laid emphasis upon the potencies, the third and sixth. No doubt those lower potencies do good work, but, as Dr. Gramm says, we must not stop with the lower potencies. We get better results very frequently by going higher. I am not going to say I would go as high as Miller. He gets up in the clouds sometimes, so high I cannot follow him, but I agree with him in his sentiment entirely that you had better go up and get higher. As Hahnemann

wrote to Hering when Hering wrote to Hahnemann that he had made provings of carbo vegetabilis in the first and second and third and had not been able to arouse a single symptom; he got his word by return mail, "Go up higher." It is a good motto for us. Whenever we fail with a remedy it is a very good motto, if we have started low, to go up higher. Croton tiglium in the thirtieth is almost invariably curative in uncomplicated cases, with the intense itching, great burning and almost erysipelatous redness, diffused redness of the whole face in some cases and in the hands, I have found that this remedy removed the intensity of the symptoms inside of twelve hours, and had my case entirely free from serious annoyance inside of twenty-four to thirty-six hours. Of course, it takes longer before the skin eruption is healed, but the severity of the symptoms I have frequently seen allayed inside of twelve hours from the use of croton tiglium, thirtieth, given as often as every one or two hours until the irritation begins to subside, and then lengthen the time to three to six hours.

With regard to other conditions and diseases of the skin, the more chronic forms of trouble as well as the acute forms, but especially with regard to chronic forms of trouble, I think much harm is done by the use of any medicinal application which suppresses the skin manifestation. I have seen some most serious results. I did not come prepared to talk about skin diseases and did not expect to listen to the paper this evening, or I would have thought up some of those cases, but a case comes to my mind now of a strong, sturdy, well built, robust young man, married and living a moderately regular life, who was suffering from an eczema that annoyed him considerably. It was not very severe but the itching annoyed him at times. It was on the hands and showed markedly. He complained to me of it, and wanted me to treat him for it. I said to him, "George, you won't be patient enough with that. It will take months to cure you of that. There is no use beginning treatment unless you persist and follow my instructions." I talked to him a while. He put himself under my treatment. I prescribed for him about two weeks without any marked effect, and he went to an old school specialist of great repute in that line, and he was placed under treatment and was perfectly relieved of his local trouble. The hands became perfectly well inside of a few weeks, and he spoke to me of it afterwards, and said he was entirely cured. This

was in the winter. The following summer he contracted a heavy cold, a thing that he had never known before. He had always been robust and strong, and never had been sick. He contracted a cold without knowing just how, for he had not been exposed seriously, and complained for a few days, had a violent chill and went to bed with pneumonia. Naturally you would say what has pneumonia to do with that skin disease? I prescribed for him in his pneumonia and brought him through to what seemed like almost a full convalescence, when suddenly without any exposure he had another chill and another attack, and it looked as though I were going to lose my patient. I worked very hard, prescribed as carefully as I knew how, and in the course of eight or ten days had my patient apparently on the verge of convalescence again. In about two weeks he was apparently verging on convalescence again when without any warning I was sent for in great haste to come and see my patient. He had had a relapse, and they thought he was dying. I worried with the case for about two weeks, and he began to improve. The third or fourth day after the improvement was marked he said to me, "Doctor, won't you give me something to stop this itching on my hands." I said, "Itching on your hands? What is the matter?" He said, "That trouble is back again." The eruption had developed just as badly as anybody ever could have asked to have it develop. I said, "George, I will do nothing of the kind. You are going to get well now. You will be well in a very short time, but you have to carry the hand eruption until you are well, and if you are foolish enough to have it suppressed again it will be your fault." That man got perfectly well and had no further relapse. I treated him a while and the eruption improved considerably, and the last I knew of him he was in the enjoyment of good health, although not entirely rid of the eruption. That makes it very clear to my mind that the eruption on his hands, suppressed by local applications, did produce changes in his system which a few months atferwards under slight provocation developed a pneumonic inflammation which nearly terminated his life, and with the re-establishment of the eruption on the hands perfect health was re-established in the patient, and just before the eruption presented itself the internal symptoms improved. During my teaching in the college in 1877 or 1878 I treated a man before the class for eczema, who had been troubled with it for a long while. He came to the clinic. I

suggested to the class that the suppression of such an eruption would almost inevitably, with this man's constitutional tendencies, develop lung trouble. The patient went to Cincinnati, went to a dispensary there, received an ointment and had the eruption suppressed. Two years afterwards he was in the clinic at our college here again, and while lecturing upon his case, not knowing I had ever seen the man before, I mentioned the fact that diseases similar to the one from which this patient was suffering very frequently were sequent upon the suppression of some eruptive condition. He looked up at me and said, "Doctor, you said that very same thing two years ago when I was in here." I said, "Were you here two years ago?" He said, "Yes, I had an eruption on the inside of my thighs and over my body, an eczema I was treated for. I went to Cincinnati and they gave me an ointment that cured it in six weeks. I have been free from it ever since, but about six months after the skin trouble ceased my cough began, and I have had that ever since." That case was treated in the clinic. He was relieved of his cough, and again had the same eruption come back. I lost sight of the case, as we usually did of those clinic cases in the college in those days, because we had not the hospital to fall back upon. This I think is sufficient for me to say to-night to show that I have good ground for believing that the local application of drugs, ointments and so on made from strong drug preparations will suppress skin diseases to the injury of the patient.

Dr. Chandler Weaver: I received a very early lesson concerning rhus poisoning. In order to give you an idea of the severity of the case I was called to treat the father told me the patient was a child and was raw. He said, "Doctor, I would rather bury that child than see it go through another night of what it has been going through for several days." That shows how severe it was. He said, "Would you mind consulting with our old physician, Henry N. Guernsey?" I said, "No, it will be a great pleasure." We went down and looked the case over. He asked me what remedy was indicated. I said, "Rhus tox. It is the only remedy indicated." "What have you been doing?" "I have been trying to antidote it with croton tiglium." "Never do it when rhus tox. is indicated." "Well, what is better?" "When you have a case of rhus poisoning and rhus tox. is indicated, give it high." "How high?" "I would give him the 2,000." I said, "I do not possess that potency." He

gave me two powders and told me to put one in half a glass of water and give the child a teaspoonful every two hours, and if I saw any relief not to use the other. I have the other yet. That night the child quieted down, the stomach condition was relieved, the angry inflammatory sores were a little better the next day, and in a very reasonable time healed up kindly. I never forgot that lesson, and now when I have rhus poisoning coming to me from the old school, carrying their arms all bandaged up with ointments, having carried them three or four weeks, I seldom fail with my rhus in a high dilution if it is indicated. To go to another case. I was called to see a stranger, a lady with her face all swelled up so I could not see her eyes. She said she was one of those cases sensitive to poison ivy. I put a few pellets of the 1,000, all I had, as much as I could buy (I never go without it) in water. The next day I called and a strange lady opened the door. I saw I did not know her and she did not know me. I said, "I was called here yesterday to see a case of rhus poisoning, and I returned to hear how it is." She smiled, and said, "I am the patient you attended yesterday." I did not know the patient, and I had seen her twenty-four hours before.

Dr. E. M. Gramm: Dr. Miller asked two questions. The first was whether skin diseases can be treated and cured without the use of external applications, and the second whether the condition that Hahnemann terms psora is produced by the external application of drug substances. You cannot answer that first question yes categorically, nor can you answer it no. There are certain skin diseases that unquestionably can be cured without the use of external remedies. There are certain other forms of skin diseases where it is not only humane, but it is necessary, in order to bring about a quick result, to use external applications. The physician who understands the use of external applications must judge which class of cases requires no ointment, and in which external applications are to be used. If you have a patient suffering torment from itching, from an acute inflammatory disease, and you know that you can relieve those symptoms by an external application, you certainly are not doing the proper thing as a healer to omit putting external applications on. I have heard of many cases in which remedies have been prescribed, usually in a high potency, with the result that the itching, the subjective sensation, got well in such a marvelously short time you knew the doctor could not be telilng the truth.

I never saw one. I think in twenty-six years and a half that I certainly must have blundered once on the remedy that would so suddenly relieve the subjective sensations in an acute inflammatory disease, but I have not. I have used different remedies in all potencies and have not changed my remedies too soon. If there is any one thing that it is a mistake to do it is when you examine your case and find a remedy is indicated simply because the patient says to-morrow "I am no better," to change that remedy. Give it time to act. The different remedies do not act with equal rapidity in a patient, nor do they act with the same rapidity in different patients. You must hold on to the remedy that you think is the proper one. I have done that, and I am not afraid to give high potencies. I use them. I have plenty of them high enough and have them low enough also, and I think it is a marvelous thing that in the twenty-six years I have been in practice I have not blundered on one single instance where my remedies have brought about these marvelous results that we read of in the journals once in a while, or that we hear of in our societies off and on. Is there any physician here who would be willing to state before this society that he had given a remedy in any potency or in any strength and that stopped the cough of pneumonia within a few hours? Not one. The subjective sensations in highly inflammatory cases of skin diseases are what the cough is to pneumonia. They are the indications of the presence of the pathological process, and those indications of the presence of that pathological process do not disappear until that pathological process is well on the way to disappearance. That is logic. Yet we hear that a certain remedy has been given and within two or three hours the patient's subjective sensations have been annihilated. It is not exactly scientific to say I do not believe these statements, but at the same time I cannot appreciate such a condition of affairs, knowing what the subjective sensations mean to inflammatory skin disease. So that the question of Dr. Miller in regard to whether skin disease can be cured by abstention from the use of local measures, must be answered that there are certain cases in which they can be and others in which it is necessary to use such measures.

In regard to psora, what does Dr. Miller understand by psora? Personally, I understand by psora the taint or impress which has been placed upon the system by some agency which has a tendency to modify acute disease deathward instead of the patients being able

to recover as they ought to, or to cause a weakness of vitality so that a disease process which otherwise would run an acute and often self-limiting course runs an exceeding long chronic course. That is what I understand by psora. So, taking my understanding of what psora is (it is a crude way of expressing it, but I think it will give you the idea I have about it), I will say no, you do not produce psora by the use of external applications. I was brought up to believe in the value of high potencies. I saw the efficacy of high potencies in the treatment of skin disease in my father's practice. I said, nevertheless, when I took charge of the skin department I was going to find out for myself whether, in the first place skin diseases could be cured best with remedies and no external applications, or with internal remedies plus external applications, and whether if external applications were used bad effects were produced. Three years, and the records of the skin department will show it, we prescribed for our skin diseases absolutely homœopathically, as a Hahnemannian Homœopathist would say, no medicinal external applications. Three years we devoted to the use of internal remedies plus external applications, and we found during the latter three years that we cured our patients quicker. Fortunately I have had a good many opportunities of observing patients who have been under the care of physicians who use external applications, and I have seen some cases that have been pretty bad by reason of the ignorance of the physician who made applications that ought not to have been made, but they did not produce psora. It does not take either six months or a number of years to find out that a patient is not getting the right thing. The patient will come and tell you so. He knows it, feels it, and can see it by the increased angriness, as the laity would say, of the patch. I have watched this matter very carefully, and I certainly do not believe we have any right to consider, after a skin disease has been cured, that the supervention of an infectious disease such as pneumonia or tuberculosis upon an economy that is apparently normal shows that that patient is in a non-resistant condition by reason of the remedies that were applied locally during an attack of skin disease. There is not a soul in this room, be he healthy or be he sick, to whom tuberculosis could not be communicated, so that the fact that any skin disease had existed in the past would not prove anything if such a communication were made. The fact that a skin disease had not existed in the past would also

prove nothing, but if it can be proven that when you apply a local application following that in logical (and also in invariable) sequence symptoms develop which show that that person has been injured, then we can say psora can be developed.

SPHYGMOMANOMETRIC DETERMINATIONS AND THEIR CLINICAL VALUE.

WM. A. HAMAN, M. D., READING.

In discharging the sense of obligation which, as the representative of our local society, I assure you I keenly appreciate, I feel it incumbent upon me to select for your entertainment a subject that is attractive and not repellant and forbidding, as the title of my paper may indicate.

The use of the adjective "sphygmomanometric," which, by the way, might well be adopted by alienists as a test word for those suspected of general paralysis of the insane, may possibly strike you as savoring of pedantry, particularly so when I admit that the more euphonic equivalent phrase "blood pressure indicating" would serve as well. Yet, the selection of the term sphygmomanometer as the proper name of blood pressure measuring instruments, seems to justify the use of its adjective, in at least the caption, to this paper.

The instruments of precision in the armamentarium of physicians (well developed before the advent of this latest acquisition) have now reached such a stage of, shall we say evolution, that practically relegates their use or employment to clinical specialists.

That this is unnecessary goes without saying when we consider that skill in their use is the result of frequent resort to them.

The fact that the rank and file of physicians seldom resort to these instruments of precision, which frequently determine treatment as well as diagnosis and prognosis, is a matter for regret, and is the direct cause of many humiliating experiences; our inefficiency is far more frequently the result of lack of careful investigation than from inherent incomprehensibility or actual paucity of resource. The justification for the addition of a new clinical in-

strument depends upon the possibility of acquiring information otherwise unobtainable, its practicability, accuracy, reliability and the possibility, through physiological and pathological knowledge, of interpreting its findings and applying the results in clinical practice.

That we have all these qualifications in the sphygmomanometer will become apparent to all who go to the trouble to acquire a theoretical and practical working knowledge of the instrument.

If there is one act of the physician, in his clinical contact with his patient, more characteristic of his calling than another, it is "feeling the pulse." It is so time-honored in its association with clinical investigations that a hand feeling the pulse is one of the bearings in the coat of arms of the London College of Physicians; and the mirth-provoking comic valentine, so often sent us by waggish friends, also attests to this fact. Any measure that will make this important examination more efficient is to be welcomed.

Although any palpable artery can be taken for the purpose of examination, yet the peculiar fitness of the radial artery for this investigation makes it practically the one always selected. In addition to its accessibility it is perhaps the artery best adapted for the purpose of obtaining trustworthy information as to the condition of the general circulation, because the hand has no special circulation of its own liable to extreme variations for functional purposes.

There seem to be a few misconceptions about the factors producing the phenomena of the pulse. One of them particularly concerns the subject chosen for this paper and to this misconception we will address some consideration.

Text books of physiology explicitly state that the pulse is caused or produced by an expansion of the artery.[2] The comparatively small quantity of blood discharged by the ventricle and the total capacity of the entire arterial system make it extremely unlikely that any perceptible expansion or dilatation of the peripheral arteries occurs when we reflect that a positive expansion of the commencement of the aorta and its first branches actually takes place to accommodate the ventricular discharge. Physiologists admit that even in large arteries when bared the "increase in calibre of the artery (at the time of the pulse) is relatively so slight that it is invisible at the profile of a large artery,"[2] thus invalidating their explanation of the production of the pulse.

In the intervals between the pulsations the tension within the artery relaxes, and, in consequence, the arterial tube becomes more or less flattened. "Then comes the so-called wave of blood propelled by the ventricular systole or, to speak more accurately, the liquid pressure in the arteries is increased and this forces the artery back into its cylindrical form."[1] It is this change of shape from the flattened condition impressed upon the vessel by the finger to the round cylindrical shape which it assumes under the distending force of the blood that constitutes the pulse: it is not an increase in the diameter of the blood vessel, but an increase of the blood pressure within it, created by the ventricular systole. The pulse then indicates the degree and duration of the increased arterial tension or fluid pressure within the artery putting its walls on the stretch.

In this connection it will be well to remember that changes in the diameter, or perhaps better stated, calibre of the peripheral arteries, are produced solely through the medium of the vaso-motor nervous system.

Another curious misconception is that the pulse indicates the rapidity of the onward movement of the blood within the artery. That this is not so can be demonstrated on your own radial artery. Compression of the artery to the point of obliteration of the pulse will find the artery throbbing all the more vigorously up to the very point of obliteration; pulsation, therefore, is not an evidence of the rapidity of the current. Indeed, an unusually vigorous pulsation should excite suspicion of an obstruction in the distal circulation. The wave transmitting the increase in tension travels twenty to thirty times the rate of the flow of the blood current.[3]

As we have seen that the pulse signifies the tension or distending force of the contained blood, then exactitude in the estimation of this liquid pressure is greatly to be desired. Such terms as hard, soft, compressible and incompressible, high, medium and low tension are not accurate enough for comparisons.

Then again "in feeling the pulse" the personal equation enters too largely because the tactile sensation and the discernment of the investigator are too variable.

Therefore, any agency that will enable observers to record their results translated into a standard of measure, and of such accuracy and reliability that leave little to be desired, is certainly to be wel-

comed with open arms. And this agency we find in the blood pressure indicator—the sphygmomanometer. It may be considered a fact beyond dispute that the efforts at producing a clinical instrument that will parallel in accuracy the results obtained with the mercurial manometer tied in the arteries in laboratory experiments have been successful, and, in addition, this instrument does not require a high degree of skill and is quite free from errors of technique.

There are numerous physiological and pathological data to be borne in mind when interpreting the findings of this instrument, and since we have considered a few of the physiological bearings of the pulse, it will be well at this point to consider those directly bearing on the use of this instrument before considering the instrument itself.

There are four factors which determine blood pressure; they are: First, the energy of the ventricular wall of the heart; second, the peripheral resistance of the arterioles and capillaries; third, the elastic resistance of the aorta and trunks of the larger arteries; fourth, the quantity of the circulating blood.

In connection with the first factor, energy of the ventricular wall, there are three points to be remembered.

The *first* is that increased rate of heart action is not necessarily attended with rise in blood pressure; within reasonable limits difference in rate has slight effect on pressure; a hurried action of the heart results in incomplete filling of the ventricles and this offsets the effect of augmented rapidity.

The *second* point is the protection that the heart enjoys through the possession of a most important centripetal nerve—the *depressor* nerve.

This nerve connects the walls of the ventricular cavities with the medullary vaso-motor centers. The endings in the ventricles are stimulated by undue distention of the cavities from increasing peripheral resistance.

These impulses are carried through a filament that in man is included in the pneumogactric nerve. This nerve exists as a separate anatomical structure in some of the warm blooded animals.

On reaching the vaso-motor center in the medulla the impulses which, up to this time, have been wholly centripetal, are now changed into centrifugal radiations that "reduce blood pressure

chiefly by lessening the tonus of the vessels governed by the splanchnic nerve."[2]

A slow but steady fall of the general blood pressure occurs until the mercurial column descends to one-half or even one-third of its former height.[2]

"This nerve is not in continuous action; it has no tonus for the section of both depressor nerves causes no alteration in the blood pressure."[2]

"In this nerve the heart possesses a protective mechanism of the first importance by means of which it is able to shield itself automatically from overwork entailed by continued high blood pressure."[3]

These statements about the depressor nerve of the heart, culled from various authorities on physiology, are to be accepted as beyond dispute, and of such vital importance in the interpretation of blood pressures that I will frequently allude to it at the cost of tiresome repetition.

The third point is that with a high resistance of the arterioles and capillaries the ventricles can not empty themselves thoroughly, and this sets a limit to the rise in pressure; this incomplete emptying of the ventricles and the protective reflex depressor mechanism of the heart set a check to the rise in blood pressure over and above which no augmentation can occur, no matter how great peripheral resistance may become or how free the supply of blood to the heart.

Another point to be remembered, in passing upon the significance of alterations in blood pressure, is that in both reflex lowering and raising of this pressure all the vessels are not simultaneously dilated or constricted.

There is normally a frequent adjustment of the vascular supply to the functional requirements of the various organs that does not materially affect general blood pressure except, perhaps, when the splanchnic vessels are generally dilated during the active period of the process of digestion.

Even in this condition the shunting of blood into the visceral vessels can generally be compensated for, and even over-compensated, by vascular constriction affecting the general circulation, thus making it possible to harmonize the conflicting results of observations on this point.

There seems to be a general counter action between the cutane-

ous vessels and those of the viscera and muscles, resulting in the condition of one set being compensated for by the opposite condition in the other.

However, there can be no question that practically all the vessels can, at one time, be either dilated or constricted; this condition is always pathologic, instances of which we have in surgical shock and the paroxysms of typical angina pectoris. In connection with the second factor determining blood pressure a few points must also be considered.

The first is that the tone of the vessels under normal conditions depends upon the balance between the opposing action of two sets of nerves—vaso-constrictors and vaso-dilators. We are apt to think of this tonus only in connection with the arteries, but the veins equally with the arteries are under this vaso-motor influence because they also contain muscle fibers.

The second is that vaso-motor tone, both local and general, is markedly affected by reflexes of remote origin. Vascular constriction, as a rule, may be provoked by the stimulation of any afferent nerve. There is but one nerve in the body, stimulation of which is invariably followed by fall of blood pressure, and this is the depressor nerve of the heart which we have just considered.

The fall in this case is due chiefly to a dilatation of the visceral vessels; with this single exception stimulation of any centripetal nerve, as a rule, raises blood pressure. In reflex rises of pressure the largest factor is vaso-constriction in the splanchnic area, although other vessels participate.[8]

The abdominal (visceral) blood vessels, the tonus of which is derived from the splanchnic nerves, more than any other part of the vascular system have the greatest regulating effect on the general blood pressure.[8]

The import of this fact is so great that it should never be lost sight of clinically in questions affecting blood pressure, because the chief means of its control is lodged here. The large capacity of this vascular area, including as it does the portal circulation with its branches, is sufficient to accommodate the entire volume of blood. The visceral circulation, intact, can, therefore, counterbalance the most extreme vascular constriction of the rest of the arterial system.

In connection with the third factor determining blood pressure, elasticity of the arteries, it is necessary to understand that were it

not for the distensibility of the aorta the systolic pressure would be extremely high and the strain on the left ventricle much greater.

The elasticity of the arterial wall is the means by which the energy of the systole is made to maintain the propulsion of the blood during the diastole. This elasticity is great, and in animals the arteries have been made to bear, without breaking, strain twenty times greater than the normal. It is safe to assume no *healthy* artery can be torn by any tension which is possible during life.

In connection with the fourth factor determining blood pressure the most noteworthy feature associated with the quantity of blood in the body is the disparity existing betwen this volume and the total cubic capacity of the arteries, capillaries and veins. This disproportion is compensated for by the tonus or constriction of the blood vessels throughout the body. Should this tone be annihilated experimentally by destruction of the spinal cord, or occur as the result of disease when sudden collapse occurs, then the quantity of blood is insufficient to fill the vessels, the blood is forced out of the arteries into the capillaries and veins until death occurs, the subject practically bleeding to death in its veins. This adjustment of vascular area to the volume of blood makes compensation for variations in quantity easy.

Tappeiner found that one-fifth of the total volume of blood can be withdrawn and within a short time the pressure again reaches a height sufficient to support life. This is, of course, regulated through the mechanism of vaso-constriction. On the other hand, Worm-Mueller has shown that an amount of fluid greater than the total blood volume of the body can be transfused into the vessels without increasing the blood pressure above a point which it frequently reaches under ordinary conditions. This adjustment is made by vaso-dilatation.

In the normal animal variations in the volume of circulating blood disturb blood pressure to a trifling degree only and this is speedily adjusted.

So far as the comparison of the blood pressures in different arteries is concerned, it has been determined experimentally that remarkably little difference in pressure exists in the arteries that are used for clinical investigation of the pulse. It is true that there is a trifling difference, but it is quite neglgible.

I would poorly requite your kindness in meeting with us were I

to trace the evolution of this instrument through its various stages, or to lengthily dilate upon the physics of the principles upon which its use is based.

So I will barely outline its history.

The first man to perfect a workable sphygmomanometer free from a large degree of inaccuracy was Von Basch, of Vienna, in 1876. It did not become popular because of the distrust of the absolute value of the results obtained. The objection is not so much to the instrument itself as to the method of its application. By it the pressure necessary to obliterate the lumen of the artery is measured. A small bag containing liquid is connected by tubing with a manometer. This bag is then pressed upon the radial or temporal artery and pressure applied directly against the underlying bone, with sufficient firmness to stop the pulsations in the artery distal to the locality of the bag. The tension within this bag is then read off in millimeters. The varying position of the radial artery with reference to the bone and interferece of the tendinous structures, adipose deposits and anomalous positions of the artery, make the results disappointing. This instrument has undergone many modifications and is still used in Europe. Although generally replaced by accurate modern instruments, yet V. Basch must always be regarded as the father of clinical sphygmomanometry.

Riva-Rocci and Hill almost simultaneously in 1897 introduced instruments that registered the amount of force necessary to obliterate the pulse by the method of *circular compression of the limb.* The important feature of these instruments is that an oblong rubber bag or cuff encircles the arm and its distention cylindrically being prevented by a canvass or leather casing the limb becomes compressed in direct proportion to its inflation, and finally reaches the point of cutting off the arterial supply of the limb.

The main objection of the Hill instrument is that the record is made by a circular spring manometer graduated in m. m.; unfortunately this variety of manometer is not trustworthy unless it is frequently standardized, thus lessening its reliability.

The Riva-Rocci instrument records the tension of the air within the cuff by means of a mercury manometer of cistern form. The glass tube carries behind it a metal scale graduated in millimeters from 40 to 60. The cistern is of heavy glass with two tubes entering, one for the attachment of the inflating bulb and the other for

the tube leading to the cuff. This armlet is a hollow tube 4½ c. m. in diameter. The inflating apparatus is a Richardson double bulb, such as is used for the thermo-cautery.

The principal objection to this instrument is the width of the cuff.

It has lately been demonstrated in the laboratory of the University of London by Mr. Lockhart Mummery that the Riva-Rocci sphygmomanometer "applied to the left thigh of a dog and a mercurial manometer connected with the right femoral artery afforded readings practically identical." In the vessels of the cadaver it has also been found to give readings in accurate accord with known pressures. But when applied in clinical investigations this instrument, the Riva-Rocci with its 5 c. m. cuff. gives readings that are higher than those of the mercurial manometer in all cases except children with slender limbs.

This has led to modifications of this instrument and at this time in this country we have three popular and practical instruments from which to choose.

The most accurate sphygmomanometer is that devised by Erlanger. Its freedom from errors results from the elimination of the individuality of the observer through the graphic recording of the systolic and diastolic pressures.

Unfortunately, it requires considerable practice to work it easily, and its bulkiness interferes with its availability clinically except in office or hospital practice.

There are two thoroughly practical, reliable and efficient instruments to be had, and, to my mind, so far as results are concerned, the selection can be determined by a "toss up." I refer to the Stanton and the Janeway instruments. One year ago the chief distinction between them was the difference in the width of the rubber armlet, the Stanton being furnished with an 8 c. m. cuff, the Janeway with a 12 c. m. cuff.

Stanton has lately modified his instrument by furnishing a 10 c. m. cuff and on request will supply a 15 c. m. armlet. This leaves very little to be desired, in a mercurial manometer, for results in measuring systolic pressures.

As before stated, it has been found experimentally that a narrow armlet requires a greater degree of distention to obliterate the pulse than a wide one. This results, I think, from the greater tendency of the narrow armlet to distend cylindricaly and force

a groove or gutter in the flesh, in this way adding the force required to displace the tissues to the necessary obliterative force. If this is prevented and the cuff kept flat during distention then the same amount of force will not be necessary and the reading will be correspondingly lower.

Janeway particularly lays stress on the importance of a cuff of at least 12 c. m. width. Sahli, the German diagnostician, does not favor the great widths that are coming into vogue. I quote his words: "It is clear, however, that this not only makes the instrument more clumsy, but also renders the closure of the cuff more difficult and less secure. Additional errors arise from the fact that such a broad cuff does not act upon an approximately cylindric surface, owing to the irregular contour of the arm. A great deal depends upon the manner in which the cuff is applied. If the cuff is emptied and applied accurately to the skin without the exercise of any pressure, cuffs only 5 to 6 c. m. in width remain so flat during inflation that the transmission of pressure is complete and the results are as accurate as they well can be from the nature of the procedure."

Sahli has devised a pocket mercurial manometer, the addition of whivh to the Riva-Rocci instrument he considers a decided advantage contributing to its portability, and quoting his own words, "rendering this excellent instrument much handier and more practical."

The essential width of cuff is that which will give the systolic obliterative reading in keeping with what is obtained by the use of the mercurial manometer in the arterial tube.

At this time reports of results should contain reference to the width of cuff and to the comparative size of the arm in order to allow correlating the figures; otherwise they are of no scientific value.

The method of applying the instrument is as follows: The cuff is adjusted about the arm on a level with the heart, snugly but not tight, and the mercury in the manometer is made to stand at zero; with the finger tips of the left hand on the radial pulse the bulb of the apparatus is compressed by the right hand; when the effect of compression on the volume of the artery becomes noticeable then the inflation of the cuff is proceeded with more slowly until the

pulse is completely obliterated when the height of the mercury is read off in millimeters.

This is the method pursued, I think, by the majority. Some prefer to rapidly obliterate the pulse and then, allowing the air to slowly escape, carefully watch the scale and note the point where the pulse wave returns.

I do not adopt this method because, in the large majority of cases, I find the point of obliteration 10 mm. higher and in the minority always 5 mm. higher than the point of return of the pulse wave. I fail to see why this higher point should be ignored. Some strike an average between the point of obliteration and the point of return of the pulse wave. This measure is that of the distending force of the ventricular systole.

Another measurement can be taken. After the point of obliteration is reached, if the mercurial column is allowed to very slowly sink, a point will be reached where, in some cases, marked oscillation of the column of mercury will be noticed. If the lowest point of maximal oscillation be marked, you will have what is termed the diastolic pressure within the aorta, caused by the recoil of the blood on the aortic semi-lunar valves through the resistance to the peripheral outflow into the capillaries. In other words, the systolic pressure is the measure of centric force, the diastolic pressure the measure of distal force.

I said that in some cases this maximal oscillation of the mercurial column is plainly to be noticed, but there are many in which it is extremely trifling and difficult to locate on the scale. No doubt this is due to the difficulty in overcoming the inertia of the mercury, which is mobile enough, but too heavy, in my opinion, for readily indicating the diastolic pressure.

Dr. George Oliver, of London, has sought to overcome this difficulty by constructing a sphygmomanometer (which he calls an hæmomanometer), utilizing colored alcohol as the indicator, which is far more sensitive to displacement.

The diastolic pressure, in healthy adults, ranges from 20 to 40 mm. lower than the systolic pressure. This diastolic pressure, when obtainable, is a valuable index of the condition of the vaso-motor tonus and the resistance of the arterioles.

If the diastolic pressure remains high, after the exhibition of

the nitrites has temporarily withdrawn the vaso-motor influence, then we can see and appreciate the ceaseless and exhausting struggle of the ventricle in carrying on the systemic circulation, resulting, sooner or later, in systolic asthenia.

The balance of my paper, however, will be limited to the consideration of systolic pressures only.

Before considering the variations in blood pressure from the viewpoint of pathology, it will be necessary to know the physiological variations.

The stability of the blood pressure is not so constant as the temperature and it is more liable to physiological fluctuations. Yet the outside limits have been determined, and, excluding the causes of physiological fluctuations, sufficient uniformity will be met with to allow of reasonably accurate comparisons with abnormal readings.

The average systolic pressure in young adults will be found to be 115 mm., the minimum being 100 (called the low normal), the maximum 130 mm. (called the high normal pressure).

In the estimation of the blood pressure several disturbing factors should be eliminated—they are excited psychical states, the influence of body tension or strain and muscular exertion, the influence of food, alcohol and tobacco, and the periodic variations due to respiration, etc.

Excited psychical conditions seem to exert the most powerful influence. Any form of mental excitement, but *anger* particularly, is hypertensive. This hypertensive action of anger harmonizes with the well-known aggravating effect of this emotion on angina pectoris. This psychic disturbance should never be lost sight of when making first observations, because the anticipation of an unknown ordeal should nullify the first reading. I have many times seen this hypertensive effect of the first reading strikingly displayed, falls of 30 to 40 mm. occurring in a short time. Usually, however, the effect is not so great.

The recumbent posture gives the lowest readings and muscular exercise unquestionably raises it.

There is some discrepancy in the results obtained as to the effect of the ingestion of food, but all are unanimous that alcohol lowers blood pressure and that tobacco causes a marked rise.

There are periodic variations in blood pressure, more or less

rhythmic, due to several causes. The respiratory waves of variation, during ordinary respiration, are negligible; but a deep inspiration at once depresses the column of mercury while a corresponding rise occurs during expiration.

I have under my care a man of sixty years affected with marked angio-sclerosis and huge hypertrophy of the left ventricle, with reduplication of the second cardiac sound and the production of a perfect "gallop" rhythm. He frequently, in fact almost constantly, presents the Cheyne-Stokes type of breathing, and during the period of apnœa his tension frequently is 155 mm., while during the acme of respiratory movements it is often 195 mm.

The term Traube-Hering waves has been applied to periodic rises in blood pressure that are observed in prolonged investigations, which extend over a number of respiratory movements. They seem to correspond with similar variations in the depth of the respiratory excursions and are, therefore, in all likelihood due to associated accentuations of activity in the vaso-motor and respiratory centers, thus altering the tonus of the vascular and respiratory systems.

These waves should be borne in mind in all clinical observations, otherwise confusion of several mm. in pressure may be the result.

Mental and physical rest must therefore be secured for reliable results and in making comparisons the pressure readings should be made at the same hour daily.

The deflections from the normal pressure are necessarily in the direction of + and — tension, or, perhaps more euphoniously expressed, as hypertension and hypotension.

In considering the clinical applications of sphygmomanometry it is customary to separate diseases into the two classes of high and low pressure ailments.

We will first give attention to the hypotensive or low pressure ailments.

In this connection it will be well to remember that there is actual hypotension and relative hypotension; or, in other words, a degree of tension may exist that is + so far as tension by itself is considered, but it may be decidedly — so far as the individual is concerned.

As an illustration, I mention a case of septicæmia due to pyelitis engrafted upon granular, contracted kidneys, admitted to the Reading Homœopathic Hospital, with a tension of 185 mm. Hg.; in a

few weeks, owing to the ingravescent asthenia, her tension dropped to 130 mm., a high normal tension, but a decidedly low tension for this individual.

Hypotension may be regarded as positive in all adults in whom the systolic pressure falls to 90 mm. We have stated that 100 mm. is the low normal tension for adults and any decrease below this point indicates a hypotensive tendency that becomes positive when it reaches 90 mm. Hypotension is a condition always met with in some affections, occasionally as a complication in other diseases, and always as a feature of the agonal termination of all disastrously ending illnesses.

The causes of hypotension are varied. As might be supposed, all wasting diseases and cachectic states, such as phthisis and carcinoma, induce hypotension because the myocardium quantity of blood and vaso-motor tone are all injuriously affected. Certain drugs, more particularly the nitrites, through vaso-motor dilatation, lower blood pressure. It is astonishing to note the decided effect produced by these drugs in some cases. To a man of sixty-three years with anginal symptoms and a tension of 210 mm. Hg. I gave 1-50 gr. of nitro-glycerine. In ten minutes the tension fell to 160 mm. Unfortunately this fall is not maintained and the effect is only too transient. Chloroform is another hypotensive drug and low arterial tension always accompanies its use and explains its comparative danger. Ether does not disturb the blood pressure in either direction.

All hæmorrhages, when severe, as might be expected, reduce blood pressure; however, when not lethal, the fall is soon replaced by an upward tendency.

The infections and septic toxæmias, when severe, are accompanied by hypotension. That the process of death is invariably attended by hypotension needs no demonstration. This may be as low as 50 mm., or even 40 mm., and in lingering cases this degree of low tension may persist several days before reaching zero.

There are two conditions, one surgical, the other medical, in both of which hypotension is a prominent feature, so prominent, in fact, that it may be regarded as the essential cause of the condition; I refer to shock and collapse. The collapse resulting in more or less sudden and unexpected death occurring during the height of an acute infection, such as pneumonia, diphtheria or typhoid fever,

such deaths that are commonly spoken of as "heart failure" are now regarded by pathological experimenters as resulting from paralysis of the vaso-motor centers in the medulla and cord, the consequence of the production in too large amount of the virulent toxins of the infecting germs. [9]

In sudden death occurring at the height of a diphtheritic infection the myocardial degeneration, it is true, adds to the intensity of the hypotension, but, as the result of laboratory experiments, there is reason to believe that by far the greater part of the fatal hypotension is the result of the vaso-motor paralysis.

These conclusions apply only to the sudden declension of vaso-motor tone that comes on abruptly and overwhelmingly during the toxæmias and not to those deaths occurring later or during convalescence which are the result of other factors.

This variety of collapse then is to be regarded as practically the same condition that obtains in surgical shock, and, when severe, results rapidly in a fatal issue. The vaso-motor centers have been overpowered by toxins and are held in complete abeyance. As the result of the opened arterioles, the blood is rapidly driven from the arteries into the veins, the large capacity of which accommodates the blood, which, from the lowered blood pressure, does not find its way back to the right side of the heart; in consequence, a train of symptoms are developed identical with those of concealed internal hæmorrhage; in fact, in typhoid fever in which both of these accidents, sudden collapse and concealed hæmorrhage, may occur, the differential diagnosis may offer such difficulty that nothing short of an autopsy can decide the cause of death. Such a case of uncertainty in typhoid collapse recently came to my notice. While writing this paper I attended a ruddy-faced lad of seven years, who had a sharp attack of rheumatic fever with typical adult type of joint involvement. On the second day an apical systolic murmur developed with pain. By the ninth day his temperature was normal and the joints were free from pain, and, in consequence, he was regarded as convalescent. This illness occurred during very oppressive heat that disappeared very abruptly during the evening of the first day of his convalescence by the temperature dropping to an unseasonably low point. At 12 o'clock midnight the lad had a chill and by 8 o'clock A. M. he had very severe pain in the right thorax and right abdomen, and was coughing frequently. I saw

him at 8 A. M. and regarded him as developing a right-sided pneumonia. The right lung, front and back, and from apex to base, was filled with sub-crepitant rales. The respiratory murmurs in the left lung were normal. He suffered intense pain in the right lung and right side of the abdomen. At 2 P. M. I was called again and found him in collapse, with running pulse, and showing a degree of surface pallor that was startling and in sharp contrast with his usual ruddy appearance. He looked as though he had had an enormous hæmorrhage. He died in a few minutes, fourteen hours from the time of the chill. This case, I think, is an illustration of the vaso-motor paralysis occurring in acute pneumonia. An autopsy was refused.

Whatsoever the cause of the collapsic symptoms, the use of the sphygmomanometer is of great practical importance, although I admit of greater utility from the viewpoint of diagnosis than treatment. There is no other method that will more surely indicate the commencement of abnormal hypotension, and, in all severe acute infections, the interest of the patient will be best safeguarded by making blood pressure observations as often as the temperature is taken. Any intelligent nurse can be taught to make these estimations.

Shock, the surgical condition in which hypotension is the essential feature, is the result of injurious reflex overstimulation of the vaso-motor constrictor impulses. The statement was made that stimulation of any centripetal (sensory) nerve, with one exception, raises blood pressure. The exception is the depressor fibre included in the pneumogastric nerve.

Surgical shock is the result of continued traumatisms to sensory nerves exciting so much stimulation of the vaso-motor centres in the medulla that a point is reached in which exhaustion of these centres occurs and then hypotension results. All injuries cause reflex vaso-motor constriction, but when these have been too frequently repeated a point is reached when the opposite condition obtains. Operations, in which large nerve trunks are involved, can be deprived of their hypotensive tendencies by first *blocking* them with cocaine, as demonstrated by Crile, thus proving the dependence of shock upon the transmission of nerve impulses by affected nerves.

The value of the sphygmomanometer in shock is the tracing of

its development in surgical operations and with it following the effects of the remedial measures. So far as the medical treatment of shock or collapse is concerned, it seems demonstrated that if there is any treatment more absurd than another it is the use, in material doses, of the nitrites, either by inhalation or hypodermically. There is reason to believe that deaths have resulted from this practice.

The experiments of Crile, who demonstrated the action of strychnia in violently stimulating the medullary vaso-motor centres, and that by continuing this stimulation, he could exhaust these centres to the point of producing the profound degree of hypotension paralleled by surgical shock, have led to a great deal of hesitancy on the part of thoughtful surgeons in the use of strychnia in treating shock. In fact, Crile found that the quickest, easiest and most certain method of producing shock in an animal for experimental purposes is by the administration of strychnia.

Mr. Lockhart Mummery has shown a slight response from the use of strychnia as a hypertensive agent in severe shock, but it was soon followed by a fall reaching a lower level than before. To use his own words, "It is possible to draw but one logical conclusion, that in all conditions and degrees of true shock, strychnia is not only useless, but directly harmful, as it tends to increase and to hasten exhaustion of the vaso-motor centres. The administration of strychnia in shock is like beating a dying horse—it may call forth an effort if we beat hard enough, but it hastens the end—and I am convinced that many a case of post-operative shock is rendered hopeless by the administration of this powerful drug, which, but for the use of strychnia, might have recovered."

I am inclined to think that our school can offer very little experience with the use of strychnia in shock administered as a similar remedy in doses sufficiently minute as not to medicinally aggravate; from the data quoted it must be homœopathic to surgical shock.

Cook and Briggs have had the best results from combining digitalin with strychnia. The synergy resulting from this combination is far more resultant than either used singly.

The sphygmomanometer has also demonstrated the absolute valuelessness of alcohol as a hypertensive agent; it lowers blood pressure.

A most important and valuable method of counteracting hypotension, in all cases of shock and collapse, is compression of the abdomen. Whenever the innervation of the splanchnic area is held in abeyance increased intra-abdominal tension, whether produced by manual pressure, or the application of a tight abdominal binder so arranged that it will not interfere with the respiratory excursions of the thoracic wall, will, at once and in all cases, be attended with an immediate rise in blood pressure.

Abdominal compression, therefore, is always a valuable auxiliary in the treatment of shock because this compression discharges the accumulating blood from the splanchnic vessels into the inferior vena cava, and this increases the supply of blood to the heart with which it can maintain and augment arterial tension.

The effects of abdominal compression in the hypotension resulting from vaso-motor paralysis led Crile to test the effect of increasing the general atmospheric pressure, by placing animals in an iron cylinder, with the result that the "blood pressure rose proportionately to the increase in air pressure."[6]

This led to the construction of a pneumatic chamber in which shock patients were placed and the atmospheric pressure raised; but "this proved to be impracticable."[6] Encouraged, however, by his experiments Crile then devised a "pneumatic suit constructed of a double layer of specially made rubber, which, when inflated, exerts a uniform pressure upon the surface, constituting an artificial peripheral resistance. It is so constructed that one or more limbs, or the abdomen, may, separately or in any combination, be subjected to pressure by inflation by means of a bicycle pump. The air valves are so adjusted that the rate of decompression may be completely controlled."

The effect of this suit upon the blood pressure may be checked by means of a sphygmomanometer. The general blood pressure may be varied at will within a range of 25 to 75 mm. Hg. The rise in pressure has been sustained as long as twelve hours.[6] "By inflation and deflation the blood pressure may, within certain limits, in the heaviest operations, be maintained at a given level. At the close of the operation, and so long as necessary, the blood pressure is watched, and deflation gradually made."[6]

I now quote Lockhart Mummery: "This method of treating shock by raising the external air pressure and so substituting an

artificial peripheral resistance for the lost peripheral resistance caused by the exhaustion of the vaso-motor centres promises to be of great clinical value and to be the most effectual method of treating the condition of shock."[4]

Abdominal compression can be utilized in differentiating between the hypotension resulting from splanchnic stasis, following failure in vaso-motor tone, and unusually low normal pressure or the hypotension resulting from myocardial weakness. As an illustration I refer to the case of a lady of 53 years, who, for a long time, had been slightly jaundiced. She complained of absolute anorexia and uneasiness in the abdomen with most persistent general weakness. This weaknes was unaccountable until it eventuated in symptoms suggestive of attacks of syncope. There were no cardiac murmurs or symptoms referable to the heart. Her arterial tension was 95 mm. Hg. I had a third party lay a bag containing fifteen pounds of shot on her abdomen with the result that the tension instantly rose to 105 mm., a gain of 10 mm., proving splanchnic vascular dilatation. I have frequently resorted to this measure and can testify to its utility in differential diagnosis. When there is no splanchnic vascular relaxation a weight of fifteen pounds placed on the abdomen does not raise the blood pressure 1 mm.

Typhoid infection, uncomplicated, is invariably hypotensive. The fall in pressure begins in the first or second week, and is generally progressive in direct ratio with the development of the toxæmia. A most important point in the use of the sphygmomanometer in typhoid fever is that estimations should be made regularly at stated intervals. Fluctuations of short duration will be met with as in health, but a "slowly progressive fall in pressure is evidence of increasing weakness of the vaso-motor centres, and of the danger of impending collapse."[8] A quick drop in pressure will mean hæmorrhage. All careful observations made by trained clinicians bear out these statements.

But there is one complication of typhoid infection that is always attended with a relative hypertension and this is perforation resulting in perforative peritonitis. The differential diagnosis of this condition is frequently beset with extreme uncertainty, and, because the only practical treatment is radical, it follows that an aid to certainty is most desirable.

I now quote Janeway: "Since the differential diagnosis of per-

foration is always difficult and the other accidents which come in question, concealed hæmorrhage and acute collapse, produce a fall, this sharp elevation of pressure may often be of inestimable value. A later fall of pressure, as a terminal event in the subsequent peritonitis, must be distinguished from the initial hypertension which can only be detected in continuous records. It is of no use to apply the sphygmomanometer after abdominal symptoms occur, without knowledge of the previous trend of pressure."

By far the most interesting and instructive discoveries and results of clinical sphygmomanometry have been made with the hypertensive conditions.

The pathological limits of blood pressure so far recorded by reliable observers are 40 mm. Hg. as an agonal pressure reported by Hensen, and Cook and Briggs have reported a case of cerebral hæmorrhage with a pressure of 400 mm. Hg. In both cases the narrow 5 cm. armlet was used.

The readings in cases of moderate high tension range from 145 mm. to 170 mm. Hg., and the common readings in high tension cases range from 180 mm. to 220 mm. Hg., and occasionally even higher. These estimations are based on the use of the wide cuff. We have gained much in accuracy in diagnosing hypertension the result of angio-sclerosis. You may think that with the tense pulse, hypertrophied left ventricle and accentuated aortic second sound the diagnosis of angio-sclerotic hypertension is easy and needs no instrumental aid. Unfortunately, the pulse is not always tense and resistant in hypertension, and those cases requiring accuracy in diagnosis are often advanced in years to middle age, when obesity or emphysema so frequently interferes with the result of percussion and auscultation.

It is particularly in the incipient cases of angio-sclerosis that are otherwise so difficult to diagnose, and for which most can be done, that our instrument renders so much aid. I have in mind a man of 24 years, who came to me complaining of a more or less constant pain of a squeezing character to the left of the sternum, extending into the left shoulder and arm, aggravated by motion, deep breathing and particularly by ascending a hill. His apex beat is displaced slightly beyond the nipple line, but there are no murmurs. His radials are soft. His systolic pressure was persistently 135 mm. He was obliged to work far beyond his strength, and, while so oc-

cupied two years ago, this pain developed. He abandoned this heavy work, but for the past year has had this pain almost constantly. The nitrites lower his tension to 120 mm., but produce a maddening headache. Potassium iodide was given, and while writing this paper, he appeared at my office with the symptoms of iodism, but for the last six weeks he has been entirely free from pain. His tension now is 125 mm. I don't think there can be any question that this young man is developing angio-sclerosis, and that his cardiac symptoms are "anginoid" in character.

The ability to measure the degree of hypertension is a great gain in certainty because of the precision with which the result of medication and the progress of the case can be followed.

Hypertensive conditions offer a wide field for discourse; in fact, the subject is too comprehensive to be more than lightly touched in a paper of this description. I intend limiting myself to some of the hypertensive features of diseases of the heart and blood vessels, kidneys and cerebral compression.

Paradoxical as it may seem, yet the statement is nevertheless true, age by itself can not be taken as the measure of senility. The phrase premature senility is a tacit acknowledgment of its truth.

Longevity seems to be a question of maintenance of vascular integrity.

No matter how free from degenerative processes the other organs may be, the development of increasing vascular resistance, the result of angio-sclerosis marks the beginning of the end.

One of the surest signs of senility is a progressive rise in blood pressure, the result of increasing peripheral resistance.

This does not necessarily bear a direct ratio with age, but it does so with the intoxications of all kinds, incessant or too strenuous work of the muscular system and abuses of the digestive apparatus.

Hard physical labor and unremitting toil lead to the early production of angio-sclerosis and the more rapid development of this tendency as years pass.

Abuses of the digestive system have a similar tendency, due, I think, to the development of sclerosis of the splanchnic or visceral vessels, thus pointing the epigram that "many people dig their graves with their teeth." This distribution of the sclerotic process is particularly unfortunate and to be regretted because it prevents the heart

from shielding itself from the overwork necessary in overcoming the increasing peripheral resistance. You recall that the depressor centripetal nerve of the heart, through the vaso-motor medullary centre, shunts a large amount of blood into the visceral vessels, thus maintaining a fairly normal tension. When this possibility of relief disappears then ventricular hypertrophy is inevitable.

This increasing peripheral resistance with the passage of years is of vital importance. A systolic pressure of 135 mm. and over, in young people, if observed a few times, care being taken to eliminate disturbing factors, is to be regarded with suspicion, and, in older persons, say, 40 years, a pressure of 145 mm. is also an evidence of too rapidly advancing vascular degeneration.

At this latter age, 40 years, blood pressure estimations should be made yearly. Should this be persistently at or above high normal tension, say, 145 mm., it indicates the necessity of modifying the habits of life in adjustment with this condition of hypertension.

From my own observations I know that it is possible to reach the "three score and ten" term of life and not have a tension beyond 145 mm., and this, too, in cases where there are no signs of myocardial weakness or failing vaso-motor tone occasioning splanchnic stasis to explain the low pressure.

I am well acquainted with a vigorous man of 74 years, who always lived well without overeating, who was subject to no excesses, the most even-tempered man I ever met; in fact, his placidity was never known to be disturbed by anger or excitement, and who is said by his intimate acquaintances to be the youngest old man they know; at the age of 74 years his tension is 145 mm. and his palpable arteries are soft. Compressing his abdomen with a bag of shot weighing fifteen pounds does not raise his blood pressure 1 mm., thus demonstrating that the innervation of the splanchnic vessels is intact, and, in consequence, that the relatively low pressure is the result of rapid arterial drainage into the capillaries.

Unfortunately, this relatively low tension is too rarely met with at this age, yet to my mind, it proves the abnormality of the usual high readings in the aged, who are nevertheless well.

It is common to find tensions up to 165 mm. in persons of 60 or 70 years, whose cardiac compensation is well maintained, and who are apparently in perfect health. About this degree of tension no

concern need be felt as long as the cardiac compensation is maintained.

But any tension above 170 mm. in the aged is decidedly too high and overtaxes and exhausts the ventricular energy in maintaining this pressure.

There is another danger connected with the high pressure in those advanced in years; in fact, age is not so much the disquieting factor as the vascular degeneration associated with the high tension, no matter at what age this unfortunate partnership, if I may so term it, occurs. No arterial pressure possible in the living animal can rupture a normal artery, but the wall of the sclerosed arteries has a diminished resistance which makes the rupture of the cerebral vessels a possibility which becomes a probability when the pressure rises above 180 mm. When we consider the frequency of miliary aneurisms of the cerebral vessels the commonness of ruptures should excite no surpirse.

General angio-sclerosis is always associated with hypertension, even in the stage of broken compensation, except when the final mortal drop in tension occurs. But angio-sclerotic changes are not always diffuse and at times are very irregularly distributed throughout the arterial tree.

The palpable arteries may be hard and the age and mode of life of the individual such that a safe prediction of marked vascular degeneration can be made and yet none of the usual signs of hypertension can be demonstrated, no accentuation of the aortic second sound and no hypertrophy of the left ventricle; in addition, the tension as recorded by our blood pressure indicator may be normal.

Such cases were, until recently, enigmatical. Now they are known to be possible through the escape of the visceral or splanchnic vessels from involvements in the sclerotic process, which allows the vaso-motor centres to guard the heart from excessive work by dilating these vessels. The heart itself, as several times stated, regulates this through the depressor nerve stimuli reaching the medulla. The origin of these nerve impulses is believed to proceed from distention of the ventricular cavities.

I attended a case of nocturnal epilepsy of ten years' duration occurring in a man of 50 years, tall, of spare habit, absternious in eating and drinking. His temporal arteries are remarkably tortuous and hard, and his radials are in a similar state, thin skin

making these conditions very appreciable. I regarded his epilepsy as the result of syphilitic sclerosis of the cerebral vessels, and expected to be able to demonstrate the signs of hypertension. But there is no ventricular hypertrophy, no accentuation of the aortic second sound, and his blood pressure is never above 155 mm. There is but one explanation, and that is the maintenance of the integrity of his visceral vessels.

In uncomplicated valvular disease of the heart, as long as compensation is maintained, there is no essential disturbance of the blood pressure. It is practically normal. But when compensation is broken and cardiac insufficiency occurs there is a tendency to hypertension that is all the more harassing to the myocardium.

The renal involvement, asphyxial dyspnœa, œdema and the psychic state, that is one of anxiety, all contribute to this hypertension. Without these associated factors pure, uncomplicated myocardial exhaustion, *per se*, would result in hypotension. I was called to see a man of 65 years, a carpenter, who is well preserved, and was working steadily at his trade until compelled to give up on account of vertigo. As long as he was in the recumbent position he had nothing to complain of, but as soon as he got on his feet he had vertigo, nausea, dyspnœa and pain in the region of the heart with palpitation. There are no murmurs; the first sound was feeble and the impact at the apex so forceless that its relation with the nipple was difficult to determine. There was no œdema. The pulse was 52, vessels were soft, and the systolic pressure was 100 mm. The fifteen-pound shot bag placed on his abdomen does not raise his blood pressure 1 mm., thus demonstrating the absence of stasis in the splanchnic circulation. I don't think there can be any question about the dependence of the low pressure on mural weakness. In this case the persistent use of strophanthus and strychnine during a few weeks raised his blood pressure to 120 mm., with the result that all his symptoms disappeared and he was again able to cautiously resume work.

Any compression of the cerebrum that results in anæmia of the medulla produces a degree of hypertension that the ordinary clinical instruments at times fail to measure. These compressive conditions accompany apoplexy and fractures of the skull, associated with internal hæmorrhage. The cerebral circulation is limited by the tension within the cranial cavity. This being a closed bony case, the

entrance of any foreign body or exudation within this case occurs at the expense of the blood circulating in the veins and capillaries.

Compression, therefore, results in local anæmia and the attending phenomena are due not so much to the compression force as to the arrested circulation. If the compressive force is sufficient to produce anæmia of the medulla then stimulation of the vagus and vaso-motor centres occurs, resulting in the slow pulse and rapid rise in blood pressure. To quote Janeway: "This advanced stage of cerebral compression is in reality an acute cerebral anæmia and leads to absolute loss of function. Now it is that the medulla responds with an effort to save life. The vaso-motor centres automatically raise general blood pressure above the intracranial tension and its blood flow begins anew. If the compression goes higher, the vaso-motor centre follows with another rise, and so step by step the blood pressure keeps just ahead of advancing brain pressure until such enormous figures as 300 mm. and more are reached.

In a case of self-inflicted pistol shot wound of the head admitted to the Reading Homœopathic Hospital, I found the man in deep coma, with stertorous breathing, and a pulse of 52. He had shot himself in the right temple with a 32-calibre revolver. The intracranial tension was forcing brain tissue out of the skull opening.

I used a 10 cm. cuff and found that by raising the mercurial column to 300 mm., this amount of compression of the arm did not in the slightest degree influence the force of the radial pulse. The Stanton scale does not measure more than 300 mm., but the glass tube is 25 mm. longer than the scale, and by raising the column of mercury to the full height of the tube a pressure of 325 mm. was obtained without in any way weakening the force of the pulsations in the radial artery. I very much regret not having been able to obtain a full record of the tension in this case. Unfortunately, a vicious cycle too frequently obtains in these cases. A high blood pressure is absolutely essential to life but, where hæmorrhage is the cause of the increased intracranial tension, the intravascular hypertension augments the bleeding, unless the open vessels can be closed surgically. If this increased intracranial tension be maintained too long a time, the vaso-motor centres become exhausted, the blood pressure falls, the pulse increases in rapidity from vagus exhaustion and death ensues.

Next to affections of the heart, blood vessels and brain we find

blood pressure observations of signal value in renal diseases. This might be surmised from our knowledge of the intimate relations existing between vascular and renal maladies. The most interesting relation of blood pressure observations in renal diseases exists in the domain of diagnosis.

In this connection it will be necessary to bear in mind the two chief varieties of renal degeneration, the intra- and the inter-tubular forms of nephritis. The intra-tubular or parenchymatous variety is accompanied by a moderate degree of hypertension; but the inter-tubular variety, interstitial nephritis or contracted kidney is always accompanied by a high degree of hypertension.

It is astonishing to notice the celerity with which hypertension is established in acute nephritis, particularly scarlatinal nephritis. Other varieties of acute nephritis are not so reliable, as instances of the rapidity of the establishment of hypertension, because many cases of so-called acute nephritis are merely the flare up of an established nephritis, due to some irritation and already attended with hypertension.

On last Thanksgiving Day (November 30th) a well-built perfectly healthy lad of 12 years had a sharp attack of sore throat, but was not attended by a physician. During the following week he was noticed to puff and bloat, and eight days later (December 8th) I saw him. His parents were more alarmed at his heavy stertorous breathing at night than by his bloated appearance and rather stupid, docile condition.

He was anasarcous, had albuminuria with blood casts, and passed two pints of urine in twenty-four hours. His pulse was 84, and his arterian tension was 145 mm. By December 17th he was passing between two and three quarts of urine, the œdema was gone and the tension had fallen to 115 mm.

A tension of 145 mm. for a lad of 12 years is decided hypertension, and this developed within eight days from the commencement of the attack of sore throat. When I first saw him he was rapidly approaching the condition of uræmia.

The hypertension at such an early stage must be regarded as toxic in character, the result of vaso-motor stimulation leading to increased peripheral resistance. Acute scarlatinal nephritis is credited by one observer with having caused a rise of 50 mm. within twenty-four hours of its onset.

Another great benefit to be derived from sphygmomanometric observations in the renal degenerations is the ability to detect the decided rise that occurs prior to the development of uræmic phenomena. In fact, all the uræmic symptoms, vertigo, headache, dimness of vision, muscular twitching, vomiting, convulsions and coma, are preceded by and attended with a decided rise in pressure, which, added to the already existing hypertensions of the renal disease, makes a most decided hypertension. The sudden onset of rising pressure in renal inflammation should receive immediate attention as pointing to the imminence of uræmic phenomena.

There is a growing tendency on the part of some clinicians to regard the convulsions as the result of the rise in arterial tension, *per se*, and not as due directly to the accumulating poisons in the blood.

Broadbent says: "Uræmic convulsions are directly associated with high blood pressure and not to uræmic poisons in the blood. Convulsions occur in high arterial tension from other causes."

In this connection it is significant that the most powerful factors in relieving the convulsions in kidney disease are all decidedly hypotensive in their action; chloral, chloroform, verat. vir., the nitrites, venesection, pilocarpine, purging and sweating; the last two, purging and sweating, being eliminant in addition to hypertensive. It is just possible that the hypotensive element of treatment is more important than the eliminant, so far as the convulsive tendency is concerned.

Regular blood pressure observations are as essential to the proper care of cases of kidney disease as is the recording of the temperature in febrile cases.

In fact ,the routine use of the sphygmomanometer in all cases of obscure illness is advised because it will, at times, reveal surprising conditions of tension that will at once put the investigator on his guard and head him in the right direction. I have a number of times, with great confidence, ruled out cases of chronic headache with low blood pressure as not uræmic occurring in those who passed too little urine of a low specific gravity.

As an illustration of the helpfulness of the sphygmomanometer in diagnosis, let me relate my experience with a fatal case of coma admitted to the Reading Homœopathic Hospital. A woman in deep coma with contracted pupils, stertorous and slow respiration was

being treated by the internes as a case of opium poisoning. When I arrived I had her catheterized, getting ℥8 of urine, which was allowed to cool. It was distinctly albuminous, and the sp. gr., taken carefully by myself, was exactly 1,000. Her blood pressure, taken twice, was 105 mm. and 115 mm., respectively. The bichromate of potassium and sulphuric acid test showed the presence of morphine in the urine. The low blood pressure excluded uræmia in spite of the albuminous urine with the sp. gr. of distilled water. It was learned that she had taken ℥2 of laudanum.

Comments on this case would be valueless because the body was not subjected to a post mortem examination.

I do not wish to be understood as saying that *all* cases of renal degeneration at *all times* have accompanying hypertension. Uncomplicated interstitial nephritis is always hypertensive, except, perhaps, at the termination of the case, when a relatively low tension may be found; or when associated with phthisis or other severe wasting illness. Then also a low tension may exist.

In none of the other varieties of nephritis does the tension run so high as in interstitial nephritis because the associated vascular scleorsis is not so pronounced. The toxæmia and the sclerotic changes in the walls of the vessels are the factors producing the high tension.

In amyloid degeneration of the kidneys there is no cardiac hypertrophy, no high tension and no tendency to uræmia at any time. This low tension is not necessarily the result of the exhausting wasting disease upon which the waxy degeneration depends, but upon the absence of the general vascular changes that lead to increasing peripheral resistance.

The use of the blood pressure indicator in the renal degeneration of pregnancy is of extreme value.

There is a want of uniformity in the reports of blood pressure in normal pregnancy. The majority of observations have been made by hospital attaches, who see cases admitted either in labor, or, so shortly in advance of it, that on account of the psychic effect of their novel surroundings and expected accouchement, their readings are not reliable and do not conform with those obtained by general practitioners. The belief in the physiological hypertrophy of the heart and the increased abdominal tension in pregnancy has led to the general belief in intravascular hypertension as the normal

condition in pregnancy. I have made a number of estimations during the past year and am convinced from observations made on healthy multipara that there is no essential hypertension in pregnancy. It is difficult to exclude the psychic effect of the condition, but by selecting multipara of phlegmatic temperament I found the usual average tension of 115 mm. In these cases this tension wa maintained even during labor, between the "pains," proving, to my mind at least, that the usual rise in tension found in labor is the result of the mental excitement. At the time of the "pain" the muscular effort causes a decided rise in pressure.

But renal degeneration wiht its accumulation of toxic material, produces hypertension which becomes significant when a decided increase is superadded.

This may be regarded as so well established that it is a more reliable guide to the imminence of eclampsia than the amount of albumin or the number and variety of casts. Puerperal eclampsia is *invariably* preceded and accompanied by a very decided hypertension.

As an illustration of the value of the blood pressure indicator in the albuminura of pregnancy. I refer to the case of a girl 17 years, a primipara, who engaged me to attend her confinement. I first saw her four weeks before the end of her term. She was œdematous in her lower limbs and face, and passed a very albuminous urine. The amount of albumin, to my disgust, I found was the maximum quantity measured by Esbach's albuminometer. Fortunately, her tension was only 155 mm., decided hypertension for her age, but not high enough to make an outbreak of eclampsia likely. The amount of albumin was ominous, yet her tension at no time exceeded 155 mm., and I was able to take her safely through a very tedious and difficult instrumental delivery; if her bood pressure had shown a tendency to progressive augmentation, the induction of premature labor would have been justifiable.

A case of post-eclamptic amnesic aphasia was admitted to the Reading Homœopathic Hospital. The patient was 19 years old and had been delivered in another hospital after having had eighteen seizures. These left her aphasic.

Three days before the outbreak of the eclampsia she suffered from very severe headache. The evening before the development of this headache she visited her medical attendant, who carefully ex

amined her urine and declared the findings negative after boiling and centrifuging it. Yet inside of twenty-four hours she developed the characteristic headache and in less than seventy-two hours was in convulsions.

As is well known, eclampsia may occur without albuminuria, but it is equally true that eclampsia never occurs without excessive hypertension. Therefore, it follows that the sphygmomanometer outranks the test tube as a prognosticator.

There is another condition in which the blood pressure indicator can give evidence of great value. In deciding the significance of occasional slight albuminuria, whether to regard it as an evidence of renal mischief, or of the slight import now attached to the cyclical albuminurias, the sphygmomanometer may determine.

The developments of clinical medicine make it impossible to agree with all the dismal foreshadowings of pathological findings. We all know people enjoying fair health who, according to the canons of pathology, should have submitted to burial years ago. As an instance I mention that there is a growing tendency to attach little importance to the discovery of traces of albumin and a few narrow hyaline tube casts in the urine of men of 40 years and over.

This is true as long as this condition obtains without hypertension, or tension greater than his years would lead one to expect.

These findings, formerly regarded as evidences of renal degeneration and ominous in their significance, are now taken to indicate, when not associated with hypertension, that, to use the words of Osler, "the man's kidneys, like his hair, are beginning to turn gray with age." In fact, the latter writer considers it a positive advantage to make this discovery for the reason that it will lead to a modification of diet and habits in consonance with the decline of life.

Life insurance examinations will find invaluable assistance from blood pressure observations. Surely the detection of albuminura will continue to serve as a basis for rejection; but the failure to find albuminuria in a man of 40 years does not make him a good risk because the most costly disease to life insurance companies (chronic interstitial nephritis) often exists with urine free from albumin. The condition of the arterial tension and of the blood vessels is of far greater importance than the urinary findings in men of 40 or more years.

A case in point came to my notice while writing this paper. A

man of 62 years, well preserved, energetic and of fine healthy appearance, secured a policy in a life insurance company last November. I have been his family attendant for years, and this spring I was called to attend him in a slight febrile ailment. While "feeling his pulse" I was struck with its tension and suggested an estimation of this tension. After he was restored to his normal condition I did so and found it to be 165 mm.

On July 5th of this year he came to my office with the statement that quite recently, on exertion and at night, sudden severe pains occurred in the heart region, extending to the left shoulder and darting to the hand, producing numbness throughout the forearm and hand. I measured his blood pressure again and found it to be 175 mm. I recognized these attacks as anginal. Three days later he again came to my office, this time in great pain and distress. His blood pressure at this time was 235 mm. Ten minutes after taking 1-50 gr. nitroglycerine his blood pressure fell to 180 mm., and, with this drop, he was instantly relieved from pain. His urine is free from albumin and sugar. The sp. gr. is 1026 and the sediment contains a few narrow hyaline tube casts.

He now carries pearls of nitrite of amyl and it is a safe prediction to make that he will not be called upon to pay many premiums.

I predict that life insurance companies will insist upon blood pressure estimation in their examinations. If they do not they will be singularly blind to their own interests, the contrary evidence of which they have recently so abundantly demonstrated.

In conclusion, I want to say that a glaring fault of this paper is that it is exactly like the flat stone that we all have skittered over the surface of water, lightly touching many places, but not entering deeply. My apology for this superficiality is my desire to make this subject entertaining and inviting, and not tiresome. I have taken advantage of all cases occurring in my practice, private and hospital, during the past fourteen months, that lent themselves to testing the practice and theories of the pioneers in this line of work, and I must acknowledge that, so far as these cases have enabled me to follow, I believe them to be unassailable. I wish to acknowledge my indebtedness to a number of authorities for many of the facts that make this paper possible. They are:

1. Broadbent's Lectures on the Pulse.
2. The American Textbook of Physiology.

3. Kirke's Handbook of Physiology.
4. Lockhart Mummery's Lecture on Shock and Collapse.
5. George Oliver's Lecture on Hæmomanometry in Man.
6. Crile's Blood Pressure in Surgery.
7. Sahli's Diagnostic Methods of Examination.
8. Janeway's Clinical Study of Blood Pressure.
9. Krehl's Clinical Pathology.

KALI CARBONICUM IN NERVOUS DYSPEPSIA.

A. C. SHUTE, M. D., POTTSTOWN.

For that complex of symptoms of gastric origin, dominated by the condition of the nervous system, now present and now absent, aggravated by any irritation of the nerves, where food can at one time be taken and digested easily, and then again causing distress, it is well to give the name nervous dyspepsia. Here Kali carb. has seemed to me to cover the symptoms of many cases, better than any other one remedy, such as:

Mental and physical weakness, mind is dull, cloudy, confused; mental labor is a burden; physical excitement is attended with undue prostration, and a general lack of tone through the body. Pains are especially of a stitch-like character, they may be shifting, but are most likely to be in left chest, very real, and making the possibility of the heart as their cause come to the mind of the patient. Nerves are unstrung; noise is especially unpleasant; fear or an unexpected touch will aggravate unduly.

Faintness and weakness when the stomach is empty, driving patient to eat, and then the taking of food is followed with faintness, nausea, colic, but especially with sense of bloating, which cannot be relieved, although belching does relieve if it occurs without any particular taste to the gas. Thus aggravation from eating, and aggravation from fasting.

Constipation alternates with diarrhœa.

Time of aggravation at 3 A. M. marked, in some cases whether the symptoms are mental, pain, cough or dyspnœa, palpitation; or insomnia after that hour.

Here this remedy has done much for me, and by careful tests from 6x to 30x to 30c, I have been able to satisfy myself the best results are obtained with the trituration, and so much of this malady is found in this locality that I use pounds of it.

While I may detail case after case, the singularity of the symptoms is great, and these patients of all types, dominated as they are by their nerves, find the needed relief in this remedy to justify them in sending for the same, when they cannot come in person, and keep on hand to take at varying intervals, and such patients have, with happiest results, taken this remedy for years.

With the remedy in all gastric conditions, I emphasize the necessity of thorough mastication of the food, and the avoidance of all liquids at meals, and, in large measure, meat. Where the stitches do persist alone after other symptoms have cleared up, I have found Cactus grand. 3x the remedy. Where I cannot get the action of remedy an occasional dose of sulphur will act nicely.

I feel confident the action of remedy is through the nerves, restoring that balance to the nerves of the organs of digestion, that they will regularly pour out the natural secretions for digestion, and the necessity for repetition of the remedy, I think, is mainly due to improper mastication, and too much liquid at meals, rather than the impairment of the nerves. The cardinal 3 symptoms that I look for are:—

Bloating, fullness after eating with inability to get relief.

Stitches in chest, and

Dulness and pressing in the head.

REPORT OF THE

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

Ophthalmia Neonatorum, by H. K. Hoy, M. D.
Adenoid Vegetations, by J. W. Stitzel, M. D.
Points in the General Management of Ear Diseases, by C. M. Thomas, M. D.
The Mouth Manifestations of Syphilis, by H. S. Weaver, M. D.

OPHTHALMIA NEONATORUM.

H. K. HOY, M. D., ALTOONA.

Ophthalmia neonatorum is a disease of the eyes of the newly born, and appears at any time within about six days after delivery, the usual time being the third or fourth day. It may be benign in character, and easily cured, or it may be of a severe type, and most intractable. It may amount to anything from a simple conjunctivitis to a purulent or a pseudo-diptheritic ophthalmia.

All authorities agree that formerly this disease was followed by most disastrous results, the rate of blindness being quoted in statistics to run as high as eighty per cent. of the cases affected. More recent knowledge upon the subject of prevention, properly carried out by physicians and nurses, has very much reduced the number of these cases, and proper treatment when they do occur has rendered the bad results almost nil. It, therefore, behooves every physician to post himself upon the subject and in every confinement engagement to ascertain the probability as to this complication, and care for the expectant mother, accordingly.

The causes of this disease may be any of the following: Exposure of the eyes too soon to bright light, dust or foul odors; careless cleansing of the eyes at birth; handling the parts with unclean hands

or soiled linen; a specific taint in the child, and most frequent of all, getting of virus into the prematurely opened eye during birth.

Every physician who attends obstetric cases should learn all possible about the state of health and family history of every patient who engages him for accouchement, and if there is any vaginal discharge, or if there is in the history that which warrants suspicio he should treat the case accordingly, and if this were rightly don there would not be many of these cases due to labor infection. Leucorrhœa, being natural to the pregnant state, has nevertheless in it an element of danger; therefore treat it. If you find the hasband has at any time had gonorrhœa, let it arouse your suspicion, and act accordingly when labor comes on. If there is a suspicion of a specific taint in the family you may expect anything. Act accordingly in all these cases. When labor comes on have the patient antiseptically douched. This will do no harm and may prevent sore eyes. Certain it is that attention given to all preventive details has so much lessened this disease under the care of those who follow this line of action, that all should do the same.

Should at any time after birth discharges appear at the canthus or margin of lids of the babe you know you have the beginning of the disease, and the affected parts must be kept scrupulously cleanse with absorbent cotton as frequently as the accumulations gather sufficiently to show, and this must be kept up continually until a cure is effected. If the case proves to be of a more severe type and mucus or pus accumulates under the lids, the eyes must be opened and the accumulations gotten out and cleansed with absorbent cotton at frequent intervals, but of this more under local applications.

The homœopathic remedies outside of which you will rarely need to go in non-infected cases are Ant. tart., Apis, Argent. nit., Kali mur., Merc. cor., Nux vom., and Puls. These remedies must be given somewhat upon external appearances and intuition, as the subjective symptoms do not avail you information. If the edges of the lids and canthus are covered with a mucoid secretion I would differentiate between Ant. tart., and Kali mur. If in addition to this there is lachrymation give Apis. If there is a pus-like discharge with swelling of lids give Argent. nit. If the discharge is excoriating making the parts sore give Merc. cor. If the lids are much swollen with tendency to bleed, constipation and colic present,

give Nux. vom. If there is a thick, yellow, non-irritating discharge causing the lids to stick together give Puls. With proper cleansing and the remedy you will have a very quick result in a simple, benign case. I have seen a case clear up in twenty-four hours. If you do not have speedy improvement suspect infection and apply local treatment, and so long as pus does not well up from under the lids upon manipulation, apply the milder astringent solutions. I have seen a case clear up very quickly by applying to the eye two drops, every one to three hours, of a solution of sulphate of zinc, 2 grains, and sodium chloride, 4 grains, to the ounce of distilled water. The edges of the lids in these cases should be greased with vaseline to prevent formation of crusts and agglutination of lids. Another very good solution to apply to these eyes in this doubtful expectant condition, is sulphate of zinc, two grains, and Alum, four grains, to the ounce of distilled water. This solution is preferred in cases of a somewhat more severe type, the discharges becoming more profuse and showing under the lids. The eyes should be thoroughly cleansed and the discharge washed away with injections of lukewarm water and this solution frequently applied between and under the lids; in severe cases as often as every fifteen minutes per day, and every three or four hours during the night. If such local treatment does not improve the case, or you have reason to know you have infection, the use of silver salts is to be resorted to. Argyrol in a ten per cent. solution is applied to the everted lid by some and they claim good results. Nitrate of silver is probably the best, beginning with a solution of ten grains to the ounce. In applying this the lids must be thoroughly everted and cleansed with absorbent cotton or lukewarm water, and the solution dropped on with a dropper, or applied with a camel's hair pencil and allowed to remain for a short time, and then a weak solution of sodium chloride used to wash off the mixture, and the lids allowed to revolve back into place. The application should be made every few hours and the eyes cleansed with absorbent cotton between the application often enough to keep away all accumulating discharge, dislodging any accumulations under the lids at every cleansing. If this is done with the thoroughness requisite almost every result will be good. Sometimes a stronger solution of the nitrate of silver can be used to very good advantage, shortening the course of the disease, and while great care should be exercised so as to keep the weaker solution

from getting into the eye, the stronger solution will do more harm in cauterizing the surface of the eyeball if the application is carelessly made. Having the head of the child firmly between the knees, a nurse holding the body and upper limbs of the little patient, both physician and nurse seated on chairs, when the lids are everted they can be held with one hand while the solution is applied, so that nothing will get into the eye until the neutralizing is complete. It is often rather difficult to get control of the lids, but persistent effort will succeed, and the oftener it is done the easier it will be accomplished.

In cases where an actual gonorrhœal ophthalmic condition exists, or where a purulent ophthalmia is present, the child must be treated just as such cases would be in an adult. In my own experience I have had the good fortune to have perfect results in all these cases that came under my care except one. Nearly twenty-five years ago a mother from a distance brought her babe to me for treatment. Both eyes were in such a condition that fully a thimble full of pus exuded from under the swollen lid of each eye. I was somewhat of a novice at treating such cases then, but I did the best I could, and in a few days I thought I was getting the case into a condition of improvement. Without any explanation the mother suddenly left the place, and that child, now grown to manhood, is blind in one eye but has some sight in the other.

Another case I will cite is one that shows ingratitude due to ignorance. I was called to attend a lady who was in the act of giving birth to a child, just one year ago. On the third day both eyes of the babe became sore, and the disease made most rapid progress. As the nursing in the case was questionable, I put forth my best efforts to save the eyes, and gave the child four personal applications in twenty-four hours, getting the best possible service from the nurse in the meantime. In a few days I was notified that I need not come again. I naturally supposed that, of course, one of my colleagues or competitors, supposed to be more competent than I, had been called to treat the case, but some months later, upon meeting the father, I inquired about the result. He replied, "Oh! that was easy; Mrs. ——— told us to get five cents' worth of a powder at the drug store and use it in the eyes; we did so and they got well at once."

DISCUSSION.

Dr. C. M. Thomas: Ophthalmia neonatorum is a disease which must of necessity be treated by the general practitioner, and we usually see the case in its latest stage. It is only in the later stages, or after certain damage has been done, that the case reaches the specialist, so that I think such papers as this are most valuable in bringing the matter before the general practitioner. In my experience cases that have gone wrong, coming into my hands, are those where the physician has been unable in the first place to keep the parts perfectly clean, either has made no effort or has failed; in the second place, where in his efforts he has caused damage to the cornea. It is not the inflammation of the conjunctiva, it is not the excessive suppuration that does harm in these cases, but the involvement of the cornea in ulcerative processes. If the parts can be kept fairly clear of pus for a few days, or rather I should say if the severity of the virulence of the inflammation can be controlled or abated in the early stages by simple cold applications and ordinary irrigation with any simple fluid, such as a physiological salt solution, with soda in the same proportion, a dram to the pint of warm water, and after the starting up of suppuration, the appearance of pus in quantity, if the parts can be kept reasonably clean and clear by simple irrigation with some such fluid, or preferably at this stage with permanganate of potash in a deep wine-colored solution, almost all cases will recover without damage to the sight. It is only where the cornea has in some way become denuded of a portion of its epithelium that we may expect bad results. The bad results are those following a destructive ulceration of the cornea, and the cornea does not readily become infected or break down unless its epithelial covering has been at some point destroyed and lost. This may happen through contact of the patient's hand, or perhaps the bed clothing, but I believe most frequenly through rough manipulation on the part of the physician in his efforts to pull apart and evert the lids. Preparatory to the making of the local application he often does damage to the cornea, perhaps very slight, but the loss of a small area of the epithelium is quite sufficient to lay the cornea open to infection, and as soon as infection has taken place then the danger has started, and often within twenty-four hours after the exposure of the denuded cornea to the source of infection it will

entirely melt away, whereas a cornea with a complete covering of epithelium may lie indefinitely in a pool of pus and be perfectly safe. Then I should say that the principle which should guide us all in the management of these cases is simply in the early stages to keep the parts cold, to lessen the virulence of the attack and shorten the early stages. While the parts are hard and boggy keep up continuous cold application and wash away, without attempting to evert the lids. Simply gently separate them far enough to let an irrigating fluid of the mildest type flow in between the lids. Keep the parts fairly clean by frequent irrigation, if necessary every few minutes. Then after this hardness and swelling has started to subside, the parts are softer, the lids show wrinkling and softening and purulent discharge starts in, then we may think of further cleansing or the continuous cleansing. We may think of the application of an astringent or caustic, such as nitrate of silver. This can be best applied, I believe, by the general practitioner by first washing out, without touching the eyeball, irrigating the surface beneath the lids with a stream of soda or similar solution or permanganate of potash, until all discharges have been washed away, and then simply instilling beneath the lids a one or two or three per cent. nitrate of silver solution. I believe cases are safer in the hands of the general practitioner under that sort of treatment than they are under treatment which requires an effort on his part to turn the lid over, expose the mucous surface, and then make a direct application of nitrate of silver to the exposed part. An important point, I believe, is this, that so long as the cornea retains its epithelium the eye is safe, and the risk of loss of epithelium is greatly increased by any manipulation of the parts in efforts to expose the suppurating surfaces.

Dr. Stitzel: How about the use of argyrol, is that as useful as nitrate of silver?

Dr. Thomas: I rather prefer the old nitrate of silver treatment. I think argyrol in the hands of a general practitioner might be safer because it can be used freely, can be poured into the eye at ordinary strength, ten to twenty-five per cent., and no harm done. It causes very much less suffering, but as to whether it is preferable to nitrate of silver I can not say.

ADENOID VEGETATIONS.

J. W. STITZEL, HOLLIDAYSBURG.

The subject of adenoid vegetations is not a new one. To Dr. Meyer, a Danish physician, is due the credit of first calling the attention of the profession to the evil effects of the overgrowth of the pharyngeal tonsil, and pointing out the practical remedy for the same.

While his paper, written over 40 years ago, created quite a widespread discussion, and much has been written since on this subject, yet I am satisfied the average general practitioner pays very little attention to this subject, or at least fails to appreciate its importance.

It is for this reason that I present this subject for your consideration today.

These growths are composed of lymphoid tissue, formerly termed adenoid, from the mistaken idea that it was glandular in nature.

The true structure has long been known, but the term adenoid originally employed by Meyer still clings to it.

The pharyngeal tonsil does not differ in structure from other lymphoid tissue and practically the same changes take place here that take place in enlargement of the faucial tonsil.

In fact we often find an associated enlargement of the faucial tonsils. It contains numerous follicles and the whole structure is highly vascular.

It is a histological structure, and is normally present in childhood, and usually but not always undergoes atrophy after puberty or in early adult life.

The cause or ætiology of this affection can be divided into the predisposing and exciting causes.

Without doubt heredity is an important factor in the production of lymphoid hypertrophies, as whole families are frequently found to be affected.

The exact nature of the inherited taint is still a matter of doubt, some authorities claiming it is due to congenital syphilis, inherited tuberculosis, or that ill-defined condition commonly known as scrofula.

Still others claim, and doubtless this is the correct theory, that it

is due to a systemic proneness on the part of the individual to inflammations of glandular tissue.

Why some people when they are exposed to atmospheric changes always develop sore throat, others an acute coryza and still others a bronchitis can not be explained on any other theory, than a peculiar proneness of the individual constitution towards inflammations of certain structures to the exclusion of others.

But such is a very well known fact, and certainly many families show a tendency to adenoid growths without any evidence of syphilis, tuberculosis, or scrofula.

Deformity of the hard palate (high arch) and deviation of the nasal septum have each been considered as contributory or predisposing causes of this affection by some observers.

The exciting causes of this affection may be and doubtless are many. Any of the exanthematous diseases peculiar to childhood as scarlet fever, diphtheria, or measles may act as exciting causes, in fact, anything that will cause an inflammation or catarrh of adjacent mucous membrane, as exposure to cold, wet feet, inhalations of irritating dust, bad air, etc., may act as an exciting cause.

Particularly if subject is predisposed to gland proliferation, and especially if these inflammations are frequently repeated, we will have a gradual increase of the normal tissue and a true hypertrophy.

To thoroughly understand the effects of adenoid growths, it is necessary to first have a knowledge of the anatomical relations of the pharyngeal or so-called luscha's tonsil to the other structures of the naso-pharynx.

The pharyngeal tonsil is found in the vault and posterior wall of the naso-pharynx between the orifices of the Eustachian tubes.

By enlarging laterally the pharyngeal orifices of the Eustachian tubes are partially or completely occluded, according to the amount of enlargement.

Thus interfering with the proper aeration or ventilation of the middle ear, with all its ill effects and train of symptoms.

It is a well-known fact among otologists, that adenoid growths are a frequent cause of middle ear disease. In fact, Dench, of New York, attributes nearly all cases of otitis media to this cause.

He says: "After I remove the adenoids and tonsils I consider the case cured."

While this view no doubt is an exaggerated one, yet doubtless many cases of suppuration of the middle ear are due to infection from the throat, through the Eustachian tubes.

As you well know, from your experience in general practice, some children get a discharge from their ears every time they get a sore throat or an acute coryza. In fact, many of these cases of so-called colds in the head of children are due to acute inflammations of the pharyngeal tonsil, and are not true acute coryza.

I believe acute suppurations of the middle ear are rare, without first having some trouble in the naso-pharynx, and infection being carried by way of the Eustachian tubes to the middle ear.

In the case of adenoids it is easily seen how any inflammation of this structure from its position in the naso-pharynx, might give rise to an inflammation at the mouths of the Eustachian tubes, closing them and the inflammation spread directly up into the middle ear by way of the Eustachian tubes.

If the inflammation be an acute one, like we often find of the faucial tonsils, it may subside in a few days, the adenoid gradually diminishing in size, the pressure on the orifices of the Eustachian tubes being relieved, under appropriate treatment; the otitis media may rapidly subside, until the exciting cause is again active, and we may have a recurrence of the trouble in exactly the same way.

On the other hand, if the irritation or inflammation is a chronic one and the tonsil is in a constant sub-acute condition of inflammation, the trouble in the middle ear will not subside, no matter how carefully you treat the ear, the case will still continue; because the cause of the trouble has not been removed. Or we may have a succession of mild attacks of inflammation of this structure sufficient to produce a marked hypertrophy.

The attacks being so mild that, from its location in the naso-pharynx, it may not cause any inconvenience to the patient, a gradual increase of tissue taking place.

In other words, a true hypertrophy, the tonsil infringing more and more upon the orifices of the Eustachian tubes, and thus interfering with the entrance of air into the middle ear, and we thus have the slow onset so characteristic of that dread disease, catarrhal deafness. A disease that usually steals upon its victim unawares, like a thief in the night, and is usually far advanced before the

patient goes to the aurist for treatment, and is responsible for more cases of deafness than all other causes combined.

You will readily see from what I have just said, that deafness is quite a common symptom of adenoids, and it has lately been shown that many cases of deaf Mutes have a well marked hypertrophy of the pharyngeal tonsil.

In some cases the hearing has been much improved by their removal, justifying the belief that early diagnosis and removal would give better results and in some cases have prevented deafness.

We have so far considered the effects of an enlargement laterally. Let us now take into consideration the effects of an enlargement in the antero posterior direction or an enlargement of the whole structure, and by again referring to the anatomical position of the pharyngeal tonsil you will readily appreciate the effects of enlargement in this direction.

As it increases in size from before backward we will have a partial or complete closure of the posterior nares according to the extent of enlargement. And as a natural consequence mouth breathing, especially at night when the patient assumes the horizontal position, and the blood naturally gravitates to the back part of the throat, increasing the engorgement and turgescence of the parts.

Mouth breathing gives rise to the ill effects of the physiological loss of function of the nasal cavity or anterior nares, and the air will not be properly warmed, causing frequent attacks of bronchitis with marked tendency to lung affections.

The effect of impaired respiration, due to post nasal obstruction, is also manifested in an ill-formed superior maxillary arch with marked irregularity in the arrangement of the teeth.

This irregularity is caused by the repeated contractions of the muscles controlling the nasal orifices necessitated by the forced nasal inspirations and sniffling.

By this drawing down of the facial muscles, the upper jaw is retracted and the contour of the upper arch is altered.

The hard palate then instead of being a perfect dome has its anterior portion tilted out, and its upper portion at the base of the nose drawn in.

Without this interference the pressure of air within the nose and pharynx counterbalances that upon the external surface, and we have normal development.

Of course this can only occur in early life when the bones are soft and pliable, but we are dealing with an affection that usually shows itself in early life during the developmental period.

Naturally this irregularity in the arch will produce unevenness in the development of the teeth, and they will irrupt high up in the alveolar process, or if placed in the arch, they will be crowded and irregular.

If the eruption occurs high up it will add to the protrusion of the upper lip, thus increasing the facial deformity so characteristic of adenoid obstruction, and if not corrected we have a permanent deformity.

From what I have already said about the effects of hypertrophy of the pharyngeal tonsil, the leading symptoms are seen to be those produced by embarrassed nasal respiration and impairment of hearing and we have the typical symptoms of adenoids.

The peculiar facial expression.

The broad and flattened bridge.

The collapsed alæ nasi.

The nasal tone of voice and lack of resonance of voice.

The drooping upper eyelids.

The drawing down of the inner canthi.

The constantly open mouth.

The narrowed palatine arch and evident difficulty in hearing.

When we have added to these symptoms the history of repeated attacks of bronchitis, persistent discharge from the nose, earache, repeated attacks of otitis media, restless sleep, with snoring or snuffling, respirations noisy while awake, especially when eating or drinking, child starting up during sleep with a sensation of smothering or suffocation, night terrors, and the statement of the mother that the child is slow in her studies at school, the half stupid and enquiring expression, all of which occasion a peculiar physiognomy and cause the countenance to acquire a stupid expression, we have drawn a picture that is not easily forgotten.

If now we make an examination of the anterior nasal cavity and find it open and free, we can be pretty sure we have a case of adenoids, and if we take a rhinoscopic mirror and examine the posterior nares, if the child is not too small, we may be able to see the growths in the vault and on the posterior wall of the nasopharynx.

If on account of the age of the child, a rhinoscopic examination is impracticable, we can pass the index finger of either hand behind the soft palate and up into the naso-pharynx and feel the irregular growths or masses.

They have the characteristic feeling of varicocele or earth worms. On withdrawing the finger you will find it invariably covered with blood if adenoids are present.

This latter method of examination is the one usually made and should be made in all cases where there is any suspicion of adenoid growths.

It is only by practice and constant use of the finger that we can become thoroughly familiar with the pharynx by digital examination.

In the absence of a mouth gag, before inserting the finger, it is well to either place a tongue depressor edgewise between the teeth or to stand upon the right side of the patient and press the patient's head firmly against the left side, at the same time telling the patient to open the mouth, and when this is done press the left cheek in firmly beween the teeth with the left hand, thus preventing the little patient from closing the mouth and biting the finger of the examiner.

You are now ready to place the index finger of your right hand up back of the palate and feel for the adenoids.

The treatment of adenoid vegetations may be divided into medical and surgical. The medical being again divided into internal and local.

Whether we treat the case medically or surgically should depend largely upon the urgency of the symptoms demanding relief and also the condition present in each case.

If there is no particular urgent symptom, it is best to see what we can do with the indicated homœopathic remedy.

Acute and sub-acute inflammation should always be treated medically. As homœopaths we should rely on the action of homœopathic remedies when practical and only resort to operation when the indicated remedy fails and we have found it useless.

Our allopathic friends depend on surgical and local treatment and tonics entirely.

There are many cases of moderate hypertrophy in which the proper hygiene and the persistent use of the suitable internal rem-

edy is all that is necessary to bring about a normal condition of the naso-pharynx.

Among the remedies frequently found indicated in acute conditions are Hepar, Iodine, Sang., Phytolacca and the two Iodides of Mercury—Merc. Bin., and Merc. Prot.

In chronic conditions the Calcareas, probably Calc. Phos., is one of the best. The Kalis as Kali. Carb., Kali. Mur., Kali. Iod., Kali. Bich., and the Barytas, Baryta Iod. and Baryta Carb., Ars., where catarrhal symptoms are marked. Sang. Nitrate is used both locally and internally by some laryngologists.

In the way of local treatment, we may carefully cleanse the naso-pharynx with some warm alkaline solution and make applications of Tannic Acid, 40 gr., to the ounce of Glycerine on a curved applicator 3 times a week.

Other local applications frequently found useful are the Compound Glycerole of Iodine and Nitrate of Silver, 10 to 40 gr. to the ounce, these often give good results.

Applications of chemical caustics are of doubtful value, and are often exceedingly dangerous, from the fact that it is not always possible to control or limit their action. And the consequent liability to set up an inflammation about the orifices of the Eustachian tubes and an associated inflammation of the middle ear.

The same may be said of the use of the actual cautery. Both internal and local medication having failed to relieve this condition, we must resort to surgical interference.

Before taking up the surgical treatment of adenoids I want to first present to you for your consideration the question when the operation for adenoids is indicated, and in doing so I can do no better than quote to you from a paper read before our National Society at Atlantic City 6 years ago by Dr. Shearer, of Baltimore. He says:

"When they do not respond to such measures as the indicated homœopathic remedy and present the following symptoms, surgical interference is justifiable:

(a) When there are repeated attacks of earache, suppurating ears or merely deafness—the result of adenoids,

(b) when the child is inclined to aprosexia and the physical signs of growth are well marked,

(c) when there is mouth breathing of a pronounced type,

(d) when constantly recurring attacks of bronchitis, laryngitis and nasal discharge are kept up by the growths,

(e) when nocturnal eneuresis of a severe type is associated with adenoid hypertrophy, operation may or may not relieve,

(f) when the child suffers from suffocative attacks during sleep, the result of deficient air supply, oxygen hunger.

(g) when the voice is very much deadened in resonance,

(h) all cases presenting a family history of tuberculosis and in whose childhood days, above all other children, the great necessity for a normal breathing apparatus is most essential.

(i) when batting the eyelids, constant sniffling and twitching of the facial muscles is indicative of reflex irritation which may develop into a true choreic condition."

These are some of the most important indications for operation, yet after operation we must not forget the absolute necessity for careful constitutional treatment.

While some operators operate without an anæsthetic, yet it is doubtful if the operation can be thoroughly done.

Besides a general anæsthetic especially in young subjects lessens nervous shock, and the operator can do his work more thoroughly than without it, and children are much more willing to undergo subsequent examinations if necessary to do so.

In some cases Cocaine will produce satisfactory local anæsthesia, especially in those advanced in years, but is not of much use in children.

For short operations in the office Nitrous Oxide gas, or Bromide of Ethyl are used by some operators. The latter anæsthetic being given by pouring an ounce in an inhaling cone or mask and giving in the same manner as ether, allowing a minimum amount of air to enter.

Anæsthesia is induced in about one minute and lasts about five minutes. Bishop, of Chicago, is a particular advocate of its use in adenoid operations.

Somnoform is being used extensively by dentists and it is claimed to be superior to Nitrous Oxide gas. It is given somewhat similar to Bromide of Ethyl, it acts longer than Nitrous Oxide gas. Patient recovers promptly with no after effects. I think some of our throat men here have had some experience with it.

Much has been said and written lately concerning the dangers of using Chloroform in lymphoid hypertrophies.

Until recently Chloroform has been considered the ideal anæsthetic for children. But on account of a number of deaths following its administration for the removal of adenoids and hypertrophied tonsils, its use has been abandoned by many laryngologists and ether has been used in its stead.

It is a question in my mind whether in these cases of death from Chloroform, much has not been due to the faulty way in which it has been given.

I can not see if plenty of air is admitted where there can be any more danger than in administering ether. Certainly oxygen and chloroform is an ideal anæsthetic.

No matter whether ether or chloroform is used the patient should be prepared as for any other operation, and should not be allowed to eat or drink within 6 or 8 hours of operation.

Many operators prefer performing the operation in the early morning when the patient is quiet.

With regard to the technique of the operation every surgeon has his favorite method, but no matter what the method, thorough removal should be the motto of the operator, and if this is done a second operation will be seldom needed.

Some operators prefer the sitting posture with the patient, held on the lap of an assistant, even when a general anæsthetic has been given, especially when Nitrous Oxide gas or Bromide of Ethyl has been used.

Of course, when cocaine has been used or no anæsthetic given this is the ideal position. But the majority of operators, when giving a general anæsthetic, prefer the prone position, the patient being placed upon the back or right side and a pad under the back of the neck or shoulders, and the head allowed to hang a little over the end of the table, or just far enough to bring the orifices of the anterior nares below the level of the larynx, thus allowing the blood to escape freely through the nose and preventing its entering the larynx.

With the patient in this position and mouth gag placed between the teeth on the left side, and held in position by an assistant, the operator using the index finger of his left hand as a guide introduces the forceps closed, and gradually bites off the growth, being careful not to injure the nasal septum or orifices of the Eustachian tubes, using the Gottstein curette to remove small particles of the growth remaining after the use of the forceps.

Hæmorrhage will be quite profuse for a few minutes but soon subsides. If the faucial tonsils are enlarged they should be removed before the adenoids at the same operation.

Very little after treatment outside of simple cleansing of the parts is necessary. It is best to keep the little patient in bed for 24 hours following operation.

With respect to instruments used in this operation, most operators use the forceps following their use with the curette. Others use the curette alone.

Of forceps there are a number of varieties, as the Concannon, Lowenberg, Nichols, etc.

Of curettes the Gottstein or some modification is the one commonly used.

For the last three years I have used Gradle's adenotome in most cases I have operated.

I simply introduce the instrument back of the soft palate, hugging closely the anterior walls of the naso-pharynx, until I feel I have engaged the anterior edge of the adenoid (this is easily told by the resistance offered to the instrument by the adenoid as you find in using the curette), then I press firmly upward and backward and pull the trigger of the instrument, and the knife is pulled down, cutting off the protruding tissue, and I have the adenoid as a whole in exactly the same way as the faucial tonsils are removed with the tonsillotome.

This specimen which I will pass around shows both Faucial tonsils and an adenoid removed recently at one sitting in a little girl of 7 years by this method.

At the time of removal, it would have been impossible for any one but an experienced observer, to have told which was the tonsil and which the adenoid.

Before closing my paper I want to cite a case of malformation of the naso-pharynx that came under my observation during the last few months.

During the month of July I placed a little girl of 8 years under an anæsthetic, for the purpose of making an examination and removing adenoids if present.

This little girl had been having repeated attacks of otitis media of the left ear, which I felt must be due to adenoid vegetations, as she was also a mouth breather.

When she was fully anæsthetized, I introduced the index finger of my right hand behind the soft palate, and was surprised to find a bony prominence about on a level with the floor of the anterior nares, which protruded forward into the naso-pharynx about the thickness of my index finger.

By bringing my finger forward and passing this prominence I found the pharynx above was divided into two about equal parts.

My finger went up into each side exactly to the first joint. In other words, the naso-pharynx a little above the level of the floor of the nose was divided into two equal parts.

The right side was perfectly smooth, the uppermost part of the left side contained a soft, spongy growth, which I scraped away with my finger nail. (You will notice her left ear was the one that discharged.)

Hæmorrhage was profuse for a short time but soon subsided. I have looked up the literature on this subject but have failed to find an exactly similar case described.

Shurley in his recent work says he has met with two cases where the naso-pharynx was almost divided into two portions by the projecting of the cervical vertebræ.

In one case he says it was undoubtedly due to an exostosis. In my case the bridge of the nose was the flattest of any one I have ever seen.

In fact, the bridge was practically on a level with the surrounding portions of the face.

I believe the division of the naso-pharynx was caused by the exostosis on the post wall of the naso-pharynx, which was probably a projecting deformity of the cervical vertebræ, and the projection backward of the vomer due to the flattened bridge.

In closing let me say, and repeat with emphasis, that in all cases of recurring attacks of middle ear disease, especially in children and obstinate affections of the respiratory tract that fail to yield to the usual methods of treatment, don't forget to examine the naso-pharynx for adenoid vegetations.

POINTS IN THE GENERAL MANAGEMENT OF EAR DISEASES.

CHAS. M. THOMAS, M. D., PHILADELPHIA.

In preparing this article it is not my purpose (nor would it be within the limit set for these papers) to consider the subject of the general treatment of ear diseases in detail.

I desire rather to interest if possible the general practitioner in a brief discussion of a few practical matters which frequently confront him in the treatment of these affections; and in doing this I trust I may be pardoned for introducing to this section matter which to many of you will appear elementary.

I have occasionally heard physicians complain that the so-called specialist is encroaching upon their province, and yet when one comes to look at the matter fairly, so far as the class of diseases is concerned, which we are now considering, one finds that comparatively few of at least the acute inflammations of the ear are seen by the aurist, and most cases that come under his care, whether acute or chronic, have first been in the hands of the family doctor.

If, then, the ear specialist is found to be a busy man, it is not possibly because of the lack of proper interest in, or study of this department by the general practitioner?

My experience leads me to believe that the general profession as a whole does not appreciate as it should the importance of the subject, and therefore most of this work, from want of the consideration which it deserves, will drift to the hands of the specialist.

I suppose it is probable that the necessity for making use of certain apparatus deters most physicians from giving the attention they otherwise might to ear diseases, and yet this ought not be so, for the instruments required are not complicated nor does their management always call for extensive experience.

There is no part of the body where ocular demonstration is so necessary both for diagnosis and treatment as it is in the ear; no place where symptoms alone are more misleading. For example, *pain* in the side of the head or ear may mean inflammation in either the aural canal or the drum cavity, or in fact anything from simple neuralgia to a meningitis.

So also of *discharge* from the canal, it tells nothing as to the source of the inflammation, which may be anything from a furuncle to a brain abscess.

Even an expert can with no degree of certainty determine the character of any but surface lesions by the symptoms alone; why then should the general practitioner to whom these cases are bound to come handicap himself in their diagnosis and treatment by a lack of familiarity with the use of the head mirror and speculum?

A little time given by the physician to practice with these simple instruments of precision would enable him to score many a success where otherwise awkward failure is assured.

In the treatment of inflammatory ear diseases, and as a preliminary to operative procedure, the matter of *cleanliness* is one of prime importance and deserves at least a moment's consideration.

In a large proportion of ear affections it is one that will count for much toward a favorable outcome and will often decidedly shorten the period of treatment; and no operation, however trivial in character, should be done without such previous preparation of the parts.

The cleansing of the ear, particularly those parts lying at the bottom of the auditory canal, can, surgically speaking, never be entirely satisfactory, as the scrubbing, shaving, etc., which are done on other free surfaces, preparatory to operations, are not practicable here.

Probably as efficient a method as any, (coarse deposits and discharges having been removed with syringe, forceps or probe under illumination with the head mirror) is first to rub gently the walls of the canal with a cotton wound probe soaked in hydrogen dioxide followed by filling the canal with a solution of carbolic acid crystals (white) in glycerine in the proportion of 50 grains to the ounce and allowing this to remain for 15 to 30 minutes; a watery solution of mercuric bichloride 1-5000 or stronger may be used in the same way.

It goes without saying that only the most carefully disinfected instruments are to be used in the treatment of the ear. Neglect of this matter has too often led to unhappy results; and there really can be no excuse for such neglect, as examinations and local treatment are almost invariably carried out under artificial illumination, and what could be simpler *in case of doubt* than the passing of the instrument to be used through the flame?

One of the most frequently required therapeutic manipulations is that of *syringing the aural canal,* for the removal of cerumen, foreign bodies or the products of inflammation.

To protest against the syringing of the ear where there may be nothing to be removed would seem superfluous if not ridiculous, and yet I know that it is not uncommon practice for physicians to direct patients complaining of deafness, itching, etc., to syringe or have the ear syringed, and that without even an attempt to inform themselves as to the actual condition of the parts.

Such practice is not only senseless, but may be distinctly harmful to the hearing apparatus. This little operation is not the perfectly innocent procedure that some seem to think it is, and should, as any other therapeutic measure, be applied only under definite and positive indications and the ocular evidence of the presence of a foreign substance in the canal or drum.

A common fault in syringes of every form lies in the large size of the nozzle lumen; the stream for syringing to be efficient should not come from a larger opening than 1½ to 2 millimeters. A small-sized stream will insinuate itself between the canal wall and foreign body, when a large one may push the substance further in.

In order to secure an efficient return flow of the water in syringing, it is most important that the stream be directed, with carefully graduated pressure, against and along the *upper back wall* of the meatus, the canal at the same time being straightened as well as possible by gently pulling the pinna with the fingers of the left hand upward and backward. Care should be exercised that the vessel for catching the return fluid, and usually held by the patient against the side of the head, be not pushed upward so to close the meatus.

As to the fluid to be used in syringing I believe the most satisfactory for the ordinary case is a blood-warm solution of soda bicarb., or sodium chloride, a teaspoonful to the pint. The only occasion in which an antiseptic is required is where there is a purulent offensive discharge; in which case the free instillation of H_2O_2 followed by syringing with potassium permangamate, 1 to 5000, will be found most serviceable.

The removal of impacted cerumen is much facilitated by the instillation of hydrogen dioxide a few minutes before syringing.

The first desideratum in an ear syringe is cleanlines. If a piston

syringe is used, it is preferably made of glass with a packing to the piston of a material that may be boiled without injuring it (asbestos or rubber). The ordinary leather plunger is not clean and cannot be made so.

An objection to the piston syringe is that if the nozzle is olive shaped (as it commonly is) it cannot be introduced well into the canal, as occasionally may be required, and if the nozzle is pointed and hard (metal or hard rubber) it may do damage to the meatal walls.

I have known a number of instances where, from the unexpected slipping of the fingers on the barrel, the nozzle point has been driven through the drum head. A piston syringe when not in use should be kept filled with carbolized water or other antiseptic.

Personally I prefer, in ordinary cases, the soft rubber ball syringe with flexible nozzle which is sold in the shops in two sizes. Its soft, slim nozzle can be introduced well into the canal and can hardly do harm to the canal or drum even in unskilled hands, and can, without damage to it, be made perfectly clean by boiling, as often as may be found necessary, which should be after each time it is used in cases of suppuration.

It must not be forgotten that vertigo, vomiting, and even prolonged syncope may follow the use of fluid too hot or cold or injected with too great and sudden pressure. Such symptoms are most apt to occur if the patient is allowed to stand during the treatment.

A rule rarely to be departed from is that the syringe is not to be used to remove blood clots from the canal after an accident for fear of washing septic material through a ruptured M. T. into the drum cavity or deeper.

The *Politzer bag* is generally looked upon as an instrument belonging exclusively to the ear specialist. I believe however, that it is an apparatus which should be in the hands of every general practitioner.

Many cases of impaired hearing may be entirely relieved in the early stages by a few inflations of the drum.

For example, following acute and sub-acute catarrh of the nasopharynx, a swelling of the Eustachian tube may so shut off the air from the drum as to much impair the hearing and cause considerable pain. Often a single inflation with the Politzer bag will relieve the pain and at once improve the hearing.

After acute or sub-acute otitis media without perforation, the

hearing is at times much lowered owing to the presence of the free exudate within the drum, and is not restored until absorption takes place. The ventilation of the tympanum and stirring up of the exudate by the Politzer manœuvre greatly hastens the absorptive process and rapidly improves the hearing.

Again we know that the treatment of acute perforative otitis media is never complete without the inflation of the ear after the closure of the perforation; indeed for the lack of this, many a case of chronic deafness results, and as most of these cases are treated by the family doctor and not the specialist, it is important that the general physician should be familiar with the use of the Politzer apparatus.

The Politzer inflation will also be found a great aid in emptying the tympanum of pus during the treatment of chronic suppurative otitis media, but should never be applied where the tympanic perforation is small, for fear of driving the discharge backward and infecting the mastoid cells.

In the treatment of inflammatory and suppurative processes within the ear, the too common practice of filling the canal with *medicated fluids* or *powder* without either examining or cleansing the parts should be mentioned only to be condemned as not only quite useless, but fraught with danger even to the life of the patient.

When it is desired to bring the deeper surfaces of the ear under the action of medicinal agents, it is most necessary that the parts be first well cleansed and usually dried, and this in the case of the ear cannot be done properly without the aid of the ear speculum and under illumination with the head mirror.

To satisfactorily instill fluids, the pinna should be held up and back to straighten the canal, otherwise a bubble of air at the bottom may prevent contact.

To make sure that the remedy reaches the deepest portion of the tympanum, get the patient (affected ear uppermost) to do the Valsalvian manœuvre and swallow immediately after, or, while swallowing, to press the tragus downward several times into the meatus like a force pump.

In the use of medicated powders, the same careful preparatory cleansing and drying is necessary. The blowing or pouring in of large quantities of such powder is to be avoided because of the risk of blocking up the canal and retention of the discharge.

In tympanic suppuration, unless the perforation is large, but little powder can be made to reach the diseased surface, and nothing more is accomplished than to antisepticise the canal, and if more than a light coating is given the M. T., a small perforation may be blocked and drainage interfered with.

Heat and *cold* are most serviceable agents in the treatment of acute ear diseases. The moist or dry heat will be found useful in the management of inflammations within the auditory canal or drum cavity, acute furunculosis, or acute otitis media. It is rare that cold applications are pleasant or of benefit in these conditions, while, preferably in the form of the ice bag, they will in mastoiditis and mastoid periostitis exert a remarkable influence not only in controlling the pain, but often in aborting an attack.

Either heat or cold to be most effective should be continuous in its applications. Intermittent action, especially in the use of the ice bag when the ice is allowed to melt without prompt renewal, only tends, as a rule, to aggravate the suffering. The parts must be kept continuously cold. We must not forget, however, that the ice bag in its soothing effect on the pain of a mastoiditis may act as a two-edged sword, and while it is comforting the patient, it may, by masking the symptoms, be favoring the further accumulation and advance of purulent exudate to the cells of the mastoid or elsewhere. In recent years I have come to the conclusion that when after 24 to 36 hours of the ice bag the patient is not comfortable *without it,* its continuance will be unsafe, and the mastoid should be opened.

Cold even over an inflamed mastoid is sometimes not only ineffective but actually unbearable; this is particularly so in old asthenic individuals or anæmics.

Of the operations which the general physician may be called upon and should be prepared to do, there is none more important than that for the drainage of the middle ear through the drum head. The acute otitis media which so frequently demands this procedure is usually treated by the general physician and not the specialist. If the operation were more frequently done by the former, the latter would not be so often called upon to care for the complications.

The so-called paracentesis of the membrana tympani is called for mainly when tympanic accumulations of exudate, either ca-

tarrhal or purulent, can not be removed in any other way. Even where perforation has already occurred spontaneously, but is insufficient, or unfavorably located for drainage, the operation m be just as strongly indicated.

The indications for the operation in acute cases will be found, briefly, in persistent pain, prostration, elevation of temperature, and bulging of the membrana tympani. All these symptoms are, however, not necessary: in fact, persistent uncontrollable pain alone is quite sufficient justification for proceeding to the operation.

There is no question but that early paracentesis will, when properly done, usually promptly relieve suffering and will often obviate unpleasant or even dangerous complications. Many a beginning mastoiditis has in this way been checked.

As to the operation itself, I believe the points to be emphasized are (1) careful antiseptic preparation of the canal and instruments, (2) the making of an incision in the M. T., which will drain the drum well and not close rapidly, (3) avoidance of meddlesome interference after drainage is established.

I need not repeat what has been said of the antiseptic preparation of the canal, although if, as I believe is good practice, th carbolized glycerine has been instilled into the canal from the begin ning of an attack of earache, no further preparation need be made, except the important one of boiling, or in some way sterilizing the knife immediately before use.

A word here may not be amiss regarding the use of *anæsthetics* for this and minor operations. The integument of the canal and the drum membrane is so sensitive and supplied with so little loose connective tissue that when inflamed it becomes exquisitely sensitive to even the touch, and the pain of the incision is almost unbearable.

The patient will be spared much suffering and danger, and tl physician much after worry, by doing these little operations thor oughly and with precision, and yet there are few patients and no children who can be depended upon to preserve the necessary quiet, without an anæsthetic. In most cases sensitiveness can be sufficient ly dulled by a local anæsthetic, but where this fails or with highly nervous people or young children a general narcosis may be required; and when we have to resort to it I believe it is more satis-

factory to induce a complete relaxation rather than be hurried in the manipulations on account of insufficient anæsthesia.

To return to the question of paracentesis, when general anæsthesia is not used the operation may be made painless by placing against the membrane a small pledget of cotton wet with pure cocain, carbolic acid and menthol, *equal parts of the crystals.* To sesure its full anæsthetic effect this should lie for 10 to 15 minutes directly in contact with the membrana tympani.

I find the most effective knife is one made like a small pointed tenotome. The blade should be as thin as possible consistent witl necessary strength, and have a keen point and edge; whether the shank be straight or set at an angle is of no consequence.

With the patient in the recumbent posture, as he will be under an anæsthetic, the relative position of the parts at the lower end of the canal (M. T.) is so disturbed to one who is not accustomed to frequent examinations with the speculum as to make it important, in such an operation as a paracentesis, to elevate the patient's head for the moment required by the operation in order to properly loca' the incisions.

The most efficient incision, and it should be a cut and not a puncture, is one reaching from the upper posterior edge of the membrane down to the lower rim and thence running several millimeters forward, forming thus a flap of the posterior lower segment.

It is imperative that it be made quietly and with precision, the eye following each movement of the knife.

Damage to the intra-tympanic structures is hardly possible ir making the cut, and if in inflammatory cases, the opposite bony wall of the tympanum is felt with the point of the knife so much the better, a depletion of the tympanic mucous membrane being desirable.

If the case be one of suspected suppuration of the drum, with congestion and sagging of the upper posterior canal wall, the upper end of the cut should be carried upward beyong the tympanic ring into the integument of the canal. In order to avoid conveying infection to a clean tympanum, it is a matter of much importance that the point of the knife be not allowed to touch the canal walls on its way to the membrane.

Immediately following the incision and evacuation of the exudate, an instillation of carbolized glycerine or insufflation of boric acid

powder should be made, and the meatus filled lightly with aseptic gauze to be changed as soon as dampened by discharge.

As a general rule, I believe it is best for a number of hours at least to avoid syringing, or other manipulations for the purpose of removing discharge. Over zealousnes in this direction will sometimes convert a simple catarrh which would otherwise heal with but little further attention into a purulent otitis with possible complications. After 6 to 12 hours rest, the cleansing of the canal by syringe or otherwise will depend upon the character and amount of the discharge.

THE MOUTH MANIFESTATIONS OF SYPHILIS.

H. S. WEAVER, M. D., PHILADELPHIA.

In presenting this paper to the Society it is not with the idea of advancing new scientific thoughts, but to call attenion to some indisputable facts in reference to syphilis, which, it seems to me, are neglected by the profession, especially those in authority in our Board of Health.

The manifestations of syphilis in the mouth are best classed under four heads, namely:

1—The Initial sore or chancre.

2—Mucous patches or secondary ulceration.

3—Gummata and tertiary ulcerations.

4—Hereditary syphilis.

The initial sore or chancre in or around the mouth is of comparatively rare occurrence, but, when found, has the same pathological signs as are found in the initial sore on the genitals. The hard indurated base, with red areola, sharp clean cut edges, which are hard and firm, the scooped out appearance of the ulcer and the dirty grayish deposit on the surface. There is usually some enlargement or tenderness of the adjacent lymphatic glands.

A chancre is the most rare of all forms of syphilis of the mouth. It runs the same course and later gives rise to the other forms of mouth syphilis.

Mucous patches develop in the majority of syphilitics and oc-

cur during the second stage of the disease. The usual location for the first appearance of the patch is on the tonsil or tonsillar pillars and from there spreads to all the interior surfaces of the buccal cavity; it is usually bilateral and in the early stages resembles an ordinary stomatitis. The patient first complains of a sore throat, and upon inspection the mucous membrane presents simply a few red erythematous spots, which gradually increase in redness and in size, until the centre of the inflamed blotches begins to break down and forms a superficial ulceration; when this occurs the color changes from a bright red to a dirty grayish hue over the denuded surfaces, which form the typical mucous patch. This spreading continues if heroic treatment is not instituted at once, until the whole inside of the mouth is converted into one sloughing mass and the patient is not able to swallow even liquids. The pain in such cases becomes agonizing and not infrequently it is necessary to resort to local anæsthetics to enable the sufferer to partake of food and drink. During this stage of the disease all of such patients are capable of infecting those with whom they come in contact if the strictest sanitary precautions are not observed. Should any of the saliva from the mouth of one of these patients come in contact with an abraded surface or any part of the body of a well person infection is almost certain to follow and a chancre develop. It is also a well-established fact that a patient suffering from very mild syphilis can infect another with the most malignant form of the disease, consequently a patient with a mucous patch no larger than a pin's head should be instructed, and if it were possible, compelled to observe the strictest sanitary measures for the protection of the general community from possible infection.

Tertiary ulceration is found during the third stage of the disease and may come on at any time from a year and a half to thirty-five or forty years after the initial sore has healed. In this stage there is first the gummatous deposit which later softens and breaks down causing the deep slough with more or less loss of tissue depending upon the size and location of the ulceration and the patient's susceptibility to treatment.

Their favorite location is in the hard or soft palate and they differ from mucous patches by quickly involving the deeper structures causing extensive loss of tissue. It is not an uncommon occurrence to have a patient come in with the soft palate almost entirely eaten

away or with a large hole sloughed out of the hard palate, while in secondary ulceration the lesion remains superficial with little or no loss of tissue. More or less deformity occurs from the contraction of the scars after these tertiary lesions have healed. These contractions or distortions differ from the normal symmetrical curves of the buccal cavity and may be the first sign to call attention to a syphilitic history in your patient.

In hereditary syphilis of the mouth the chief diagnostic sign is in the teeth. As soon as the second teeth begin to make their appearance a serrated or roughened cutting edge is noticed. These conditions were first described by Hutchinson and are now spoken of as Hutchinson teeth.

Physicians when called upon to treat syphilitic patients should be cognizant of the fact that they assume two responsibilities. First, the proper care, treatment and cure of their patients. Second, and by no means least, that they should instruct patients how to properly disinfect themselves and materials used by them during the infective stages so as to protect from possible infection all those with whom they associate. Many physicians, not from lack of knowledge, fail to give their patients proper instructions or fail to impress upon them the necessity of properly carryiny them out so that in a short time they become lax and neglectful of them. and in others the patients wilfully neglect all sanitary measures, thereby jeopardizing the health of all intimately associated with them.

Have you ever paused for a moment to consider the great danger to which we are all subjected from infected servants, who cook, launder, sew, nurse and in a hundred and one ways handle materials through which any member of the family may become infected? If you have not do so, and if these statements seem exaggerated to you select some nose and throat clinic at one of our hospitals and attend for a few days and see the number of servants applying for treatment who are filling just such positions as above mentioned. I have gone over the records for new cases in the nose and throat department of the Hahnemann Hospital for the past year and find 20 per cent. of them present a specific history.

It is true that most of them are not in the infective stage, but many are and are capable of transmitting the disease to those around them if proper sanitary measures are not strictly enforced.

Allow me very briefly to report three cases of recent occurrence in my own practice:

1—Young girl of eighteen employed to take care of two children in family here in the city. She developed a sore throat which was treated by the family physician for a few weeks without relief and each time when questioned by him as to it probably being specific absolutely denied all history of infection or possibility of same. Feeling reasonably sure of his diagnosis, but not wishing to have her discharged without another opinion, he asked me to see her with him, which I did, and found the whole interior of her mouth one mass of mucous patches.

When confronted with the facts of the case she finally admitted having a sore on the genitals at that time, which, upon examination, was found to be a genuine Hunterian chancre.

2—Young lady twenty-two years of age, by kissing a friend who had some mucous patches, developed a chancre on the lip which finally healed and its true character was not discovered until a secondary specific iritis developed and partially disabled one of her eyes.

3—Man about thirty, who was employed as a chef in one of the down-town restaurants, was treated in the dispensary. His mouth was filled with mucous patches and it would seem to me he was not a suitable one to fill a position of that kind.

In this stage of rapid progress, where many of our cities have the most improved and up-to-date laws concerning infectious and contagious diseases which the boards of health insist and compel the laity and physicians to observe, so far as possible, would it not be wise to add syphilis to the list of infectious diseases under surveillance and have the boards of health adopt some means or other whereby our innocent and unsuspecting public could be better protected? I very well know that this is a difficult proposition to handle and all the specific cases would not care to be reported to a board of health, neither do I think it necessary to do so; but it seems to me that some better way for protecting the public should be instituted?

In the majority of cases, especially in private practice, if the physicians were all careful to instruct their patients as to the infectious nature of the disease and how easily they can infect other members of their family or those with whom they come in contact,

many would obey instructions and thereby minimize the danger. In our hospital practice we are not so fortunate in having patients who are so thoughtful about others. Every day we see fathers, mothers, brothers and sisters who from the error of their ways contract the disease and during the infective stage jeopardize the remaining members of the family and all with whom they come in contact by not using any means whatsoever for their protection. It is in this class of cases that I believe a vast amount of good can be accomplished.

Patients who run the risk and unfortunately contract the disease usually give a clean-cut history and the physician immediately puts them under the proper treatment; but those who are innocently inoculated do not give a clear history as to infection and they may in many cases go through the primary and secondary stages without any symptoms, consequently receive no treatment at all and later become physical wrecks.

It is true that comparatively few are infected in this manner in comparison with the total number of syphilitics, but should I ask each individual present his experience I am confident that the great majority have treated just such unfortunate cases and these are the ones which we, as physicians, should strive to protect.

I am confident that much good could be accomplished if the board of health should print a number of small cards with simple precautions necessary for the patient to use to prevent infection of others while they are suffering from any mouth symptoms, and have these cards distributed among physicians especially in our hospitals, so that patients applying for treatment can be supplied with one.

My main object in writing this paper was to call attention to some of these facts and thereby elicit a free discussion, not on the symptoms of mouth syphilis, but how we can best regulate and control our specific patients, so as to minimize the danger of infection in all classes of society.

DISCUSSION.

Dr. R. E. Tomlin: I would like to mention two cases that recently came under my observation. One was a young lady of excellent reputation, who had been a patient of mine and passed suc-

cessfully through a serious attack of typhoid fever several years before. Noticing that she had a sore mouth she called on a neighboring physician, she living nearer to him than to me. This went on from a simple ulcer to a very serious affair, the nature of which at first was not suspected, but before a great while was known. No possible history of infection in the usual maner was obtained. She did have a sore in the mouth, and it was a case somewhat similar to the case mentioned by Dr. Weaver. She was attended by a physician, a member of this society, and an able man, but in spite of the most active treatment inside of six months she died, apparently an innocent victim of syphilis.

Another case. A young lady I am now attending, aged 24, was engaged to be married to a young man, and in the usual course of events he persuaded her to allow an indulgence. There was no discoverable lesion, noticeable at least, about him in any way, and she permitted it. Some time later she noticed a number of the usual symptoms about her, and was not conscious of what they meant, coming to me for another ailment. I asked her what this rash meant. She said she did not know. I made further inquiry and discovered that she had a chancre which had healed over. This case has gone on to the most severe mouth and throat symptoms, and that is why I mentioned it. She was very much surprised when I told her she must absolutely refrain from kissing anyone or permitting anyone to kiss her, or from the use of any articles in and about the house. Up to this time she had been doing that and permitting her friends to kiss her freely.

Another instance. Coming down Tenth street the other day I saw a conductor with a fully developed rash all over his face, hands and arms. He took a 25 cent piece from a lady passenger, put it into his filthy mouth, changed it and put that coin among the other money. It is reasonable to suppose that some one is likely to contract innocent syphilis from that coin. In view of the character of this diease, of its awful ravages among innocent victims, it seems to me imperative that medical bodies should take up this matter in a more sensible way than they do. Why it is not done, why people are allowed to run at random with such diseases, is more than the average man can conceive.

Dr. E. M. Gramm: The question of the mouth lesions of syphilis is certainly an exceedingly important one. The average phy-

sician who gets a case of syphilis to treat is afraid to tell his patient the facts concerning the disease, and neglects to give the instructions that should be given to patients in regard to the possible duration of the disease, to the necessity of care that should be taken, to the danger of infection, and if the patient be a man the physician rarely insists absolutely on abstention from alcohol and tobacco. If there are any two poisons that render mouth lesions possible and more than probable it is the use of alcoholics and tobacco. All of us who use tobacco know it is a pretty hard matter to give it up on short notice, but it is made easier for patients by impressing on them the idea that you are not recommending the stopping of these pleasures for their own sakes but for the sakes of their families. If we do that we can get many of them to stop. I now have a young man who was unfortunate enough to be infected on the cheek. He did not know what it was, and came to me to find out why it should be that he had an ulcer that was lasting so long, and that seemed so intractable to ordinary treatment. He is a country-born man, a man whose business is in the country, one of these thorough-going, honest, straightforward men that are found more in the country than in the city, with a wife and one child. He went about among his customers selling goods, and, of course, taking a drink now and then and smoking quite a great deal, and when I said to him he would have to stop smoking and that he would have to stop the use of alcohol absolutely, he said, "I cannot do it." I said, "Whom would you rather see diseased, your family or yourself?" I gave him a very thorough idea as to the dangers that his wife ran and that his little child ran if he were to kiss that child and continued smoking and developed mouth lesions. Many of the mouth lesions are so insignificant that patients pay absolutely no attention to them. A man smokes a few more cigars than usual, and his tongue bites a little at the end, and he says it is the tobacco. He does not examine his tongue, and there we have a minute lesion with a little whitish, adherent discharge that can readily be communicated to forks or knives or spoons, or the cup, or in washing the face if the towel happens to pass over the tip of the tongue it will carry it to the towel and infect people accidentally. But if the patient suffers considerably, if there is marked dysphagia, you can readily impress on his mind the necessity for stopping the use of these irritating substances. Of course, sour things, vinegar, acids and various kinds of acid fruits,

should be prohibited, but the main thing after all, it seems to me, is when we get hold of a patient to give him a thorough idea of what can come. Tell him, of course, that the disease is curable, for it is curable, providing that he co-operates with you. Mouth lesions need develop in a very slight degree providing the patient co-operates with you in the treatment, but Dr. Weaver has called attention to one of the most important subjects as indicating the method of the spread of innocent syphilis that could possibly be brought to the attention of this society.

REPORT OF THE

SECTION OF MATERIA MEDICA.

A Comparison of Some Remedies Useful in Headache, by C. C. Rinehart, M. D.
Natrum Muriaticum and Its Philosophy, by Edward Cranch, M. D.
Calcarea Carbonica as a Preventive of Tuberculosis, by S. W. S. Dinsmore, M. D.
An Analytical Study of Aethusa, by Eduardo Fornias, M. D.
A Few Well Known Remedies That Deserve to be Better Known, by J. C. Guernsey, M. D.
Digitalis and a Few Other Heart Remedies, by Aug. Korndœrfer, Sr., M. D.
Kali Carb. and Some of His Relatives, by Julia C. Loos, M. D
A Few Comparisons, by C. S. Middleton, M. D.
Materia Medica Study, by W. A. Seibert, M. D.

A COMPARISON OF SOME REMEDIES USEFUL IN HEADACHE.

C. C. RINEHART, M. D., PITTSBURGH.

The paper here presented is just what its title indicates, i. e., a comparison of *some* remedies useful in headache; to attempt an exhaustive paper on this subject would, I fear, tire your patience. The symptoms given are, in every case, those that are characteristic of the remedy. I have constantly endeavored to avoid giving any symptom of a remedy, that did not have this distinctive quality.

It might be said that this method of discussing the subject partakes more of the character of therapeutics, and would naturally belong to another bureau. This may be true, but nevertheless it is my idea of the correct method of studying Materia Medica and and certainly renders it easier of application. I do not think the time of the symptomatic prescription is past.

In the headache, for which Aconite is indicated the brain seems to swash from side to side, as if in boiling water; a congestive headache, pressing and contracting pains in upper part of forehead; face swollen and pale; vision obscured, not the blindness of Kali. Bi. and Gelsem., but an obscuration or uncertainty of sight as if through a veil; fears he will touch persons passing. Headaches after fright. Fear is one of the strongest characteristics of Acon. and is more or less found in nearly every case where Aconite is indicated, not necessarily fear of death, but it may be fear of crossing a street; fears something is going to happen, an indefinable, unreasonable fear. It is this fear as much as any pain that may be present that causes the patient such agonizing restlessness. The headache of Acon is < by light, noise and motion, > by lying quietly in a dark room; by nosebleed and by copious urination.

In Æsculus we have a headache from gastric or hæmorrhoidal disturbances, with feeling as if a board were on the head; a dull, stupefying headache, with sensation of fullness and beating of temporal arteries, and pain extending through the head from one temple to the other. If with these symptoms the patient complains of weakness and constant dull backache, walking almost impossible; scarcely able to stoop or rise after sitting; with sensation as though the rectum were full of small splinters or a cutting pain in rectum, we have a very reasonable expectation of a cure by the exhibition of Æsculus.

Collinsonia is also a remedy useful in headaches of gastric or hæmorrhoidal origin, dull, stupefying headache with dizziness and desire to sleep. When with these symptoms we have constipation and congestive inertia of the lower bowels, with itching and burning in the rectum, we have a right to expect Collinsonia to render excellent service.

Nux vomica is a remedy also of great service in gastric or hæmorrhoidal headaches. In these conditions there is intense occipital headache, dizziness, with nausea and vomiting; or headache as though the head would split, with contusive pain in the brain, with increase of pain from any motion even the slightest. Now if we have this headache, in a person leading a sedentery life or an indulger in "the cup that cheers and inebriates," and an irritable, and quarrelsome disposition and the constipation for which Nux. Vom. is familiarly known, i. e., a lack of co-ordination in peristalsis

causing frequent and ineffectual desire for stool, we may expect Nux. to give a good account of itself.

Aloe Socotrina is another remedy of much benefit in gastric and hæmorrhoidal headaches. Congestion to the head compelling one to sit up (like Bellad.). Headache across the forehead with heaviness of the eyes and nausea; the pain compels the patient to close the eyes, or, if he desires to look at anything, he must make the aperture between the lids very small. With the headache, notwithstanding the nausea, the patient has a good appetite. The hæmorrhoids protrude like bunches of grapes and give a constant bearing down sensation in the rectum. Now, if we have that sense of insecurity or lack of dependability of the anus, with this headache we know we have a sure shot with Aloes.

For headches at the menstrual periad we have many very efficient remedies of which a few follow:

Selenium.—Frontal headache, and pressing down on the eyes as though they would be pushed out, with vertigo, everything turns black before the eyes, worse in the morning and in the open air, especially when these symptoms are found in patients suffering from suppression of the menses, with bearing down toward the sexual organs and shortness of breath.

Sepia.—Hemicrania, stinging pain from within outward, in one, mostly left, side of the head or forehead, with nausea and vomiting and contraction of the pupils, worse indoors and better in the open air. Pains come in terrific shocks and cause the patient to jerk the head in spite of herself. The mind symptoms of Sepia much resemble Pulsatilla. She is sad and weeps frequently without knowing any reason for doing so; is worse indoors and better in the open air. With this difference, however. The Pulsatilla patient is of light complexion with blue eyes and mild yielding disposition, while the Sepia patient has dark hair, dark eyes, and while rather of a gentle disposition, has still considerable disposition to be quarrelsome. The Sepia patient differs from Pulsatilla and indeed from all other remedies in this peculiar symptom, that, contrary to her usual habit, she becomes indifferent to her usual occupation, her housework, her family and even to those she loves best. This headache and these other symptoms are frequently found in patients with menstrual and other uterine disturbances, and when found Sepia will generally bring a quick and permanent response.

Graphites.—Headache with severe congestion and dark redness of the cheeks, and anxiety and oppression of the chest on lying down Usually patients in whom Graphites is indicated are of the large fleshy type with tendency to herpetic or eczematous conditions. They are "fat, cold and costive," as has been very aptly said of Graphites patients, and they usually suffer from delayed and scanty menses.

Actea racemosa.—Rush of blood to the head. Head feels too large for the cranium, after suppressed uterine discharges. Opening and shutting sensation when moving the head and eyes; great pain in the head and eyeballs, increased by the slightest motion; top of the head feels as if it would fly off, declares she will go crazy. Intense pain as though a bolt were driven from neck to vertex, worse at every throb of the heart. Especially useful in headaches about the menstrual period and in uterine complaints.

Cocculus has also a very similar symptom to that found in Actea Rac., i. e., headache in nape of the neck and occiput as though it were opening and shutting like a door. With the headache of Cocculus, we have great weakness during the effort to menstruate, she can scarcely stand or talk.

Cannabis Indica also has a similar symptom. Feels as if the top of the head were opening and shutting and as if the calvarium were being lifted.

Stannum.—Headache begins lightly, increases gradually to its highest point and then gradually subsides. Sun-headache beginning at 4 A. M., gradually increasing until 11 A. M., continuing severely until 3 P. M., then gradually subsides and entirely disappears at 6 P. M., to begin again at 4 A. M. next morning. Pains are violent, beating, extending from forehead to vertex, feels as though head would burst, from inward blows; eyelids forced together, can be but slightly opened; least noise increases the pain to an intolerable degree. Here much like Glonoine and Belladonna, but the Glonoine headache is more a powerful congestion while that of Stannum is more neuralgic in character. While the most pronounced difference between it and Belladonna is found in that, with Bell., the pains come and go suddenly instead of gradually, as they do in Stannum.

Helonias.—Pain in the forehead as if a band about an inch wide, were drawn across from temple to temple; pressing pain in one, or both temples, in a small spot. A burning pain or sensation in the

top and front of the head; *better by motion and mental exertion*. these headaches are usually found in menstrual or uterine derangements, although they may, and do, accompany other conditions.

Argentum Nitr.—A peculiar symptom of Argentum in headaches in a feeling of expansion, as though the head were enormously enlarged, which feels better when tightly bound. This relief from being tightly bound is also found under Pulsatilla and Apis. Has much vertigo, often accompanied by buzzing in the ears; sight of high houses makes him dizzy like under Gelsem.

Gelsemium. Dull tired headache at the base of the brain; wants to lie with the head upon a high pillow and be perfectly still. The headache is aggravated by lying with the head low, from smoking and in the heat of the sun; is temporarily relieved by pressure and stimulants. Such headaches as usually follow a spree. Headache from passive congestion; the headache begins in the occiput and spreads all over the head or settles over the right eye and is frequently relieved by a profuse flow of urine. This headache beginning in the occiput passing up over the head and settling over the eye, especially the right, is also found under Bellad. and Sanguinaria. In Gelsem. it is due to a passive congestion, in Belladonna the congestion is active, and in Sanguinaria it is the genuine American sick headache and is accompanied with more sickness of the stomach than is found under the other remedies.

Gelsemium has also a sick headache that is preceded by blindness; as the head begins to ache, the blindness disappears, here much resembling Kali Bich. Its sick headache is not accompanied by so much nausea and vomiting as some other remedies, Sanguinaria and Iris, for instance, but has the trembling and weakness characteristic of this remedy.

Glonoine.—This is one of the greatest of our headache remedies. The pain is intense, with great throbbing and sensation of fullness and constriction of the vessels of the neck. This intense throbbing headache, seeming to arise from the neck, with visible throbbing of the carotid arteries, which seem full to bursting, is very characteristic of this remedy. No remedy equals Glonoine in producing sudden and severe congestion of the head and it is equally prompt in curing it. The remedies nearest resembling Glonoine in headaches are Belladonna and Melilotus. Bellad. and Glono. both have

the fullness, pain and throbbing, but that of Glon. is more intense and sudden in its onset. Bellad. is better by bending the head backward, while Glon. is worse. Bellad. is worse from having the head uncovered or from having the hair cut; the Glon. patient cannot even bear to wear his hat and wants his hair cut. Bellad. is worse from lying down, even though he should keep still, while Glon. is generally better from lying down and keeping still. In both the least jar or shake of the head increases the pain. Melilotus has also great congestion of the head, with intense pain, and sense of fullness, and with the headache there is redness and flushing of the face; paleness of the face would not contra-indicate either Bell. or Glon., but would certainly contra-indicate Melilotus. The Melilotus headache is often relieved by a profuse epistaxis.

Ignatia is a great remedy for headaches of a nervous or hysterical character. It is especially adapted to nervous women, while its close relative, Nux. Vom., is better adapted to similar conditions in men. Headache as if a nail were driven out through the side of the head, relieved by lying on it, is a very valuable symptom of Ignat. and is frequently found in those whose nervous system have been shocked by over anxiety, grief or mental overwork. It is also another of those remedies which terminate in a profuse flow of urine. The headache is aggravated by coffee, smoking or inhaling tobacco smoke, by pressing at stool; it is frequently relieved by eating and often has considerable hunger, but is aggravated soon after eating; it is worse from cold winds, by turning the head suddenly or any change in position, by noise and light, is better from warmth, lying on it, soft pressure, external heat, and a profuse flow of limpid urine.

Ipecac. has headache with persistent nausea not relieved by vomiting. Headache as though bruised all through the bones of the head and down into the root of the tongue.

Iris Vers. is one of our sheet anchors for sick headache, either of gastric or hepatic origin, often beginning with a blur before the eyes; headache over the eyes, especially right side, with nausea and vomiting of intensely sour or bilious matters, is better from constant motion and worse at rest.

Kali Bich. has a headache in small spots that can be covered with the point of the finger; very useful in supraorbital neuralgia, where the pain is especially severe at the supraorbital notch. It

is a better remedy than Gelsem. for the so-called blind headache. The blindness comes on before the headache. Then as the headache increases the blindness disappears; the pain settles in a small spot and is very intense; the pains appear nd disappear suddenly.

Lachesis is an excellent remedy for sun-headaches *after* Glon. The charcteristic here is, the patient is troubled with headache, every time he is exposed to the heat of the sun, especially useful in chronic cases. A characteristic symptom of Lachesis is, weight and pressure on the vertex, found mostly in women at the menopause. It has also heat and burning on top of the head like Sulphur and is a better remedy than Sulphur when this symptom occurs at the menopause.

Headache with a very pale face; and the patients sleeps into the headache are valuable characteristics of Lachesis. It has also a headache extending into the nose, coming mostly in acute catarrh, especially when the discharge has been suppressed—frequently found useful in hay fever, with violent paroxysms of sneezing, which are decidedly worse after sleep, even in the day time.

Natrum Mur. has a headache of an intense throbbing character, which would cause one to think of Bellad. were it not that it occurs in such anæmic subjects, that Bellad. is out of the question. It here very much resembles the intense, throbbing headache of China, which comes after severe hæmorrhages, having exactly the symptoms found in active congestion when there is not enough blood left in the patient to make a congestion.

Natrum Mur. has also a headache in school girls and here it is so similar to Calcar. Phos., that the correct prescription is hard to make, both being found in anæmic subjects.

Sanguinaria.—We have in Sanguinaria a very valuable remedy for sick headache. The pain commences in the occiput, passes up over the head in rays, and settles over the right eye, with nausea and vomiting and frequently chilliness; the patient wants to be in a dark room and to remain perfectly quiet. The pains are sharp, lancinating or throbbing, and very severe; occasionally the pain is over the left eye, but it is generally over the right.

Silicea has a headache beginning in the nape of the neck and extending over the head to the eyes, relieved by wrapping the head up warmly, there seems to be a lack of vital warmth, takes cold easily, especially when uncovering the head or feet; wrapping the

head up warmly seems to provide a degree of warmth that is lacking; Silicea is another of the remedies that terminate their headaches with a profuse flow of urine.

Spigelia has a headache which commences in the occiput in the morning, spreads over the left side of the head, and causes violent pulsating pain in the left temple and over the left eye; sometimes with nausea and vomiting, aggravated by the least noise or jar.

Sticta Pulm. has a severe headache which is the accompaniment of acute catarrh. There is a heavy pain and pressure in the forehead and the root of the nose, which is relieved when the nose begins to discharge freely.

Veratrum Album. Headache as though the head were torn to pieces, comes on in the afternoon, lasts through the night, and gets better towards morning, the pains are violent and drive to despair, with great prostration, fainting, and the characteristic cold sweat on the forehead. Another of the remedies with profuse flow of urine at termination of attack.

Spongia has a headache as though the skull would burst in vertex and forehead with insatiable appetite.

Staphysagria.—Brain aches as if torn to pieces in the morning on rising, worse from motion, better from rest and passes off with much yawning.

Lachnantes.—Headache, head feels enlarged and as if split open with a wedge; cannot get warm even under a feather bed. Pain extends down the nose.

NATRUM MURIATICUM AND ITS PHILOSOPHY.

EDWARD CRANCH, M. D., ERIE.

As Homœopathic prescribers we use Natrum Muriaticum, or Chloride of Sodium, in many of the ills of humanity, and we select it for Homœopathic reasons, not empirically.

We have no quarrel with those who will not study how so to use it, for their blindness is our opportunity, but we grieve for humanity, that so many men go about as healers, rejoicing in their ignorance of the greatest law of cure.

Let them study and ponder some of the most easily verified facts concerning Sodium Chloride, Natrum Muriaticum, or briny soda.

Its common name may be illustrated by an anecdote of an accident that befell the venerable Dr. Noble Young, one of my instructors in the early seventies, whose once silver door-plate was even then an undistinguishable shell of green copper, so rigidly had the old doctor held to the then established custom or canon, that the older and rustier the sign, the better the physician—of course!

Well, Dr. Young came into the laboratory of the U. S. Medical Museum in Washington, where I was working at the time.

By some mischance he got a drop of nitrate of silver in his eye, with extremely painful effect. The head chemist, a tall, solemn army surgeon, whose name now escapes me, slowly enunciated the following learned phrase, "bring the chloride of sodium," whereupon Dr. Young, with his hand to his eye and jumping with the pain, roared out, "Damn it, bring the salt!"

He got the salt, and used it antidotally, or chemically.

So would a Homœopath use it, but he would also use it in other cases dynamically, or homœopathically.

Which serves to show how a man may be an Allopath and a Homœopath at the same time, but not in the same prescription.

Natrum Muriaticum, or common salt, is a daily article of food, or rather a daily aid to the absorption of food—how then can it be a curative drug at the same time?

If, we say, by its attenuation, and thus its absorption to inner organs which control vital processes, then we are immediately asked, how does the daily dose in the food escape similar attenuation, and further, how can triturated iron, silver, tin, or silica affect us as medicaments, when we are daily getting particles of the same in our food from the utensils of the kitchen and the dishes of the table?

I reply that these small particles are not attenuated in ordinary use so as to release their molecular activity, which happens when the drug is attenuated in the presence of a neutral medium or vehicle, by which after due succussion and trituration, the molecules are held sufficiently apart to be active, and permanently so.

This may and does occur in some substances at a lower degree of attenuation than in others, rarely at the first, better at the

third, sixth, twelfth or thirtieth. Beyond this any gain is unappreciable in most cases.

In the future U. S. Pharmacopœia, common salt will have, beyond its present uses as a chemical substance, as a "normal salt solution" for hypodermoclysis, or as a gargle, douche or bath or lotion, its homœopathic or dynamic uses, some of which are as follows:

In common colds in the head, and in hay fever, as preventiv and cure, it is unsurpassed.

In many ailments from starvation, or in emaciated, marasmic, or cachectic subjects, especially if irritable and melancholic.

In headaches, alopecia, pyrosis and dry constipation, in eczema, urticaria, dermatitis solaris, in nightmare and in somnambulism, it is a master drug, but its chief laurels have been earned in malaria, in competition with the vaunted quinia.

For special indications, consult the text-books, and you will find that the dictum of the old school, as I heard it given by the Dr. Young I have already quoted, namely, that in the treatment of all forms of malaria, "Quinine covers it like a tablecloth," has some exceptions, after all.

How soon will the day come when every physician will put aside prejudice and learn the law?

All other investigations are allowable to every one, but pride, and a mistaken idea of consistency, forbids the use of homœopathic attenuations.

In a progressive, living science, such conservatism has no place. It must go out with the rusty signs and the dirty hands, that characterized the old physician in times not gone, but going.

All physicians will finally unite in clean and honest progress, and medical sectarianism will cease.

CALCAREA CARB. AS A PREVENTIVE OF TUBERCULOSIS.

S. W. S. DINSMORE, M. D., SHARPSBURG.

At no time have the journals of all schools contained so many articles under the heading of Tuberculosis as during the year 1900,

and so far as I have been able to see, the drug treatment has not been advanced. I think of no single new remedy that has been brought forward recently, that has proven of any great value in the treatment of this disease. No doubt great good has been accomplished by the measures advocated, but do they not apply with equal force to many other conditions. An abundance of fresh air, nutritious food and a good general health government of the patient, are conditions that have a tendency to restore health under any and all circumstances. The best illustration we have of the open air treatment we find in our rugged ancestors, who worked out in the air in the fields and forests and lived to be octogenarians, and in many cases far beyond the span of human life. Yet this was not on account of their hygienic manner of indoor living, but may be credited to the amount of time they spent in the fresh air and the healthy natural food they consumed.

It would take me too far afield to recount the cure-alls that have been brought to the notice of the profession in the past decade. The many drugs that have been lauded for a time and cast aside as found useless, and in many instances positively harmful, and while it is true that the properly indicated Homœopathic remedy has recorded many cures, it is also true that many more failures have resulted, and we have had to see our patients slip away, it may be more slowly than under other methods or treatment, yet none the less surely. It holds good, that given a case of pulmonary tuberculosis after the symptoms of hepatization are present, a very large percentage, if they are to rely on drug treatment solely, even of the most approved Homœopathic variety, will succumb to the disease, and that is my excuse for inflicting this paper upon you.

It is a plea for preventive treatment. It is the duty of every physician to be the guardian of every growing child in his clientage. In no other field of medical practice is the adage so clearly proven "An ounce of prevention is worth a pound of cure" as in the large number of delicate children who are the soil for the culture of Tubercular Bacilli, many with an inherent tendency, others with surroundings that invite such a disaster, and the family physician, with knowledge of the premonitory symptoms, should be the first to scent trouble and warn the parents in time that proper treatment may tide the frail growing boy or girl past the period of puberty, that they may be saved from becoming a victim of

the monster that so far has proven to be a veritable scourge of the human race.

An article appeared about six months since in one of the popular literary magazines, written by an old school physician, in which he summed up as final advice to the laity "if you want to keep well, stay away from the Doctor." How many of us have not had a follower of that advice come for treatment for one of the malignant diseases, long past the time when it was possible to even give relief, and in this disease in particular, taken in time, prevention is nearly always successfully accomplished, while if taken in hand later, treatment is most frequently a failure.

There are several remedies in our *materia medica* that in their pathogeneses are similar to the early manifestations of Tuberculosis, and for a careful comparison of the five or six leading ones, see article in Medical Century, December, 1905, by Professor W. A. Dewey, of Ann Arbor, Michigan, to whom I am indebted for a concise statement of the symptoms and the order in which they are placed.

Every one of us can look back to some young person, with an occasional nose-bleed, a bright, active mind,—such boys and girls frequently talk during their sleep and some of them are somnambulists; most of them, if we could get their history back to infancy, perspired freely in the cradle, mostly about the head. Even at that early age the danger flag was out, showing that the hosts of the invader had selected a new camping ground, and were getting ready to invade the enemy's country.

As a symptom, emaciation stands out boldly as a condition that should arouse our suspicions. It is a symptom found under every proving of Calcarea Carb. Nose-bleed occasionally, or when cause may be seen, need not cause any alarm to patient or physician, but the general tendency to bleed on any and the slightest occasion should always arouse suspicion, for it is a well-known premonitory symptom of tuberculosis. It is found frequently under Calcarea; in fact, Calcarea and Aconite vie with each other in the cure of this symtpom when it stands out as a symptom only, but we must remember that an aconite nose-bleed is accompanied with fever of the sthenic variety, while the Calcarea carb. patient is more apt to be fat and flabby. Thin, transparent skin, that freckles easily instead of tanning, with ten-

dency to eruptions on the face, makes one think of Calcarea, and also that in the future that person may develop tubercular diseases. If the outside covering is thin and tender the mucous membrane is also easily irritated, giving rise to ophthalmia, sore throat, tonsilitis, bronchitis, discharge from the ears, and in fact irritated mucous membrane of all the outlets of the body; all of which are aggravated by contact with cold air. The patient is better in a warm atmosphere. There is a symptom which I do not often see mentioned, but which I have observed quite frequently in case where Calcarea is indicated, namely, late falling to sleep, and dulness late in the morning. Patients could rise easier at six than at eight A. M. The cough of Calcarea may be differentiated by this, that after a hard, dry cough at night a little salty expectoration is raised, with pain, as if something had been torn from the larynx; tickling cough, as from a feather in the throat, with frequent discharge of bland, blood-streaked mucus, from the throat.

The tubercular Calcarea patient frequently has offensive discharges from the ears; the child is vivacious and precocious, and is usually fair, fat and animated. The child sweats easily, has a tendency to emaciation—though formerly fleshy, has frequent attacks of nose-bleed, and is unusually bright. Many such children suffer with tuberculosis in some form. How often we see lime deposits come to the rescue of our patients. The stiffened joints in Potts' disease, the fixation in spinal curvature, and even calcification of parts of the lung tissue.

I have in one instance found lime scales in the afterbirth of a tuberculous woman, and we are well aware that it is the process of calcification that prevents the breaking down of tubercular tissue in many parts of the body, and often saves the life of a patient. Such persons have been known to live out a natural life with the tubercle completely surrounded or walled off by calcareous formation. This leads one to believe that it is one of nature's remedies, or at least nature has made use of it as a preventative treatment in this disease.

I would like you all to go over the symptoms of Calcarea carefully and see how many children you know, or have known, that closely resemble the portrait of the typical Calcarea child. Now if you had an album in which you had the pictures of patients who bore a resemblance to Calcarea, Lycopodium, Sulphur, Sepia, Ar-

senicum, Phosphorus, Nitric acid and Silica I believe you would turn most frequently to the Calcarea portrait, and there you would find a close living resemblance to the drug. Many a man and woman are filling a useful place in life to-day that but for Samuel Hahnemann and the proper prescribing of Calcarea Carb., would have been laid away and the world would have lost much, as well as the cruel ending of the life of the individual, and if we as physicians are to be the real healers and teachers of men, at least until medical science is so far advanced that an actual specific is found for the treatment of Tuberculosis, it is our duty to apply these drugs that are so well known to us and whose provings are within our reach, to the betterment of the human race, to say nothing about the glory of the profession.

AN ANALYTICAL STUDY OF ÆTHUSA.

EDUARDO FORNIAS, M. D., PHILADELPHIA.

NERVOUS SYSTEM.

MIND AND SENSORIUM.—(1) Emotional disorders.—*Great anguish, restlesness, oppressive anxiety.*—Anxiety and apprehension. —*Ill humor, vexed and irritable, with crying spells* (CHAM.).—Disorders of the intellect.—Delirium, frenzy, insanity.—*Hallucinations,* sees rats running across the room, sees cats and dogs; tries to jump over the window.—(2) *Semi-comatose condition, after vomiting and purging.*—Child lies unconscious, with dilated pupils and staring eyes.—*Vertigo,* with sleepiness, cannot lift the head up. —In the open air she must lean against something not to fall.—When the giddiness ceases the head gets hot.—*Mental confusion.*—Inability to talk.

SENSATION AND MOTION—(1) *Sensation* as if *both sides of the head, chest, or small of the back were in a vise. Distressing pain in the occiput, nape and down the spine* > from bending stiffly backward.—Violent pain in the brain, as if it were dashed to pieces.—Stitches and pulsations in the head.—*Tearing, paroxysmal*

pain in the forehead, in the temples, in either side (*Hemicrania*)—Weight in the forehead, with irritable mood—*Sensation of coldness in the abdomen* (AMBRA GRISEA., CARBO. ANI.)—Painful contraction of the stomach.—(2) *Infantile spasms,* with clenched thumbs, red face, eyes turned downward, pupils fixed, dilated, foam at the mouth, jaws locked.—*Spasms, with stupor and delirium* (BELL.) Tottering gait.—*Great prostration, languor, debility,* children cannot stand or hold up their heads.—Spasmodic hiccough.

VEGETATIVE SYSTEM.

NUTRITION AND SECRETION—(1) *Retrograde metamorphism.—Malnutrition.*—Wasting.—Gastroasthenia.—*Gastric hyperæsthesia.—Intolerance of food, especially milk.*—Cholera infantum.—*Projectile vomiting of curdled milk* (in children), of a milk-like substance, of green mucus, or of a bloody mucus.—*Exhausted and drowsy after vomiting.—Aphtha,* in the mouth and tongue.—Continued thirst.—*Emaciation,* with pale, sunken, withered face and blue rings around the eyes.—(2) *Salivation or dryness of the mouth.*—Moist tongue, feels enlarged.—Liver secretion, arrested.—*Lochia,* thin and watery.—Acid secretion with thrush.—Cold sweats.

DIGESTION.—Gastroses during dentition (CALC. CARB.)—*Intolerance of milk.—Sudden, projectile vomiting of curdled milk, soon after nursing.*—After the sudden ejection of the milk, the *child is exhausted, falls asleep, and soon awakes for a fresh supply.*—The child dozes after every vomiting spell, or after exhausting stools.—*Milk disagrees* (CARBO VEG.) *and produces colic, diarrhœa and constipation.*—Regurgitation of food, some time after eating.—*Vomiting of greenish mucus,* or of a frothy, milky-white substance (*Catarrh of the stomach*).—*Shifting flatulence* (PULSATILLA), around the navel, with pinching pain and urging to stool.—Painful contraction of the stomach.—*Diarrœic stools,* of a thin, bilious, light yellow, or *greenish substance,* attended by tenesmus.—Sudden paroxysmal expulsion of the contents of the stomach, preceded by nausea, and followed by prostration, sopor and morbid appetite (*Hysteria.*)

RELATIONSHIP.—ÆTHUSA resembles very much its congener CONIUM. Both produce *nausea, vomiting, headache, giddiness, tottering gait, sopor,* and at times fatal results. In analysing ÆTHUSA,

one often wonders, whether its action, like that of CONIUM, is chiefly exerted upon the nervous system and not upon the muscles. But of two things we can be certain, one is, that it possesses a powerful influence, of an irritative character upon the gastric mucosa, and the other that it partakes of *Hemlock's* full action, which is *sopor.*—Compare it with CICUTA, ŒNANTH., CUPRUM, ASARUM, or with IPECAC and OPIUM.—In intolerance of milk, with ANT. CRUD., CALC. CARB., PULSATILLA and VALERIANA.—In *coldness of abdomen*, with AMBRA GRISEA and CARBO. ANIMALIS.

THERAPEUTICS.—In the pathogenesis of ÆTHUSA we find a variety of related symptoms sufficiently important indeed, to point out with precision its curative range. Its *irritative action upon the gastric mucosa* leads us at once to *malnutrition* with all its dystrophic phenomena. The *athreptic condition* noticed, under its action, seems to arise principally, if not solely, from the *inability of the infantile stomach to retain and digest milk.* Its sudden expulsion by vomiting, as we have seen above, is after a short period of slumber and reaction, soon followed by a craving for the very food rejected, and this, I think, does not indicate the existence of any organic trouble. In some cases, however, which I have observed carefully, I have concluded that the intolerance of milk and its sudden rejection, was due, not to gastric irritation directly, but to reflex influence, and this has been particularly the case with adults, where the intolerance of food is not limited to milk, and where the repeated vomiting seldom exhibited any signs of retrograde metamorphism or waste of tissue. In view of what I have stated, the question naturally arises: Is the projectile and persistent vomiting of ÆTHUSA due to a hyperæsthetic gastric mucosa, or does it depend on reflex bulbar irritation? My answer is, to both, for while there are cases in which no *wasting* takes place, there are others, especially children, presenting a marked *wasting process*, which cannot be ascribed to anything but to a *destructive metabolism*, as the conversion of matter especially protoplasm into a lower state of organization and ultimately into waste products, is evident through the whole pathogenesis of this drug. At any rate, the *catabolic changes* noticed, particularly in connection with the *nervous system*, point directly to the *stomach* as the organ more frequently affected by ÆTHUSA, a remedy which appears to have a favorable influence upon nutrition, to disintegrate cellular structures and to stimulate the

formation of new. In fact, the uses we have made of this drug and the results we have obtained with it abundantly confirm this opinion.

A constant source of error in prescribing, is our ignorance as to the *relative value* of *symptoms, and vomiting of curds,* especially, has a clinical significance, much overlooked by some, and overrated by others. In the first place, in infancy, all that is usually regurgitated and vomited is milk, more or less coagulated, of course, for milk cannot be returned by a healthy stomach without being curdled; but what the physician must consider is, the class of the milk taken, the frequency of its expulsion, the size of the curds and the attending phenomena. If cow's milk has been taken, we know that casein from this source readily coagulates into large indigestible masses, rich in fat, while if human milk, the casein then coagulates into fine flocculi containing much less fat and easily acted upon by the gastric juice. These are facts which should guide our efforts in nursing children properly. Then again, the stomach contents of a child after half an hour or so, of a bottle of cow's milk, invariably show casein clots still undigested; but, apart from these abnormalities, we should never forget that *frequent vomiting* in children is of much less diagnostic value than in adults. The stomach of a child empties itself of its contents so readily, because of the more vertical position of the organ, and absence of the greater and lesser curvature, because of the comparatively slight development of its cardiac sphincter; and, in part, no doubt, on account of its excitable nervous system. Regurgitation and even ejection of curdled milk when the child sucks at all greedily is extremely common, and we a' have observed easy vomiting supervene upon the shaking motion of the infant immediately after feeding. Moreover, many children who readily vomit the milk without any obvious cause, are found, after careful examination, to be suffering from *dyspepsia,* which is usually dependent on *congenital debility, insufficient nourishment, and early weaning,* singly or combined, and to them we should add the *abuse of farinaceous,* and principally *over-feeding,* the infant receiving irregularly the bottle to quiet its cries, and not having the time to digest during the intervals. In these cases the ejected substances are very acid, and not always due to free H. Cl., but more frequently to the *acids of fermentation. Diarrhœa* usually attends them, but the stools are not frequent, they vary in color from yellow to green, and above all, contain grains of undigested casein.

So, I think, that the rationale of ÆTHUSA's *vomiting-therapy* does not rest upon solid bases, for while often the *projectile vomiting* is undoubtedly directly due to *gastric hyperæsthesia*, and attended by *atrophy*, not infrequently the symptoms clearly indicate that the *origin of the vomiting is cerebral*, not exhausting and enervating the cells, or producing wasting. At least, in some cases under my observation, the *repeated vomitings of curdled milk* were not followed by emaciation, nor associated to symptoms of gastric derangements, or preceded by a sensation of nausea. Sudden, projectile vomiting, such as would indicate this drug, may have nothing to do with the intolerance of milk, and may occur in *neurotic children* or in *hysterical females*. *Persistent projectile vomiting*, then when not associated with any *gastroenteric trouble and loss of flesh* is often the prelude of *cerebral disease*, and has a great significancy; but this is not always the casee, for vomiting, even projectile, may be a *pure neurosis*, unattended by other symptoms either of brain or gastric disease and last for years. The paroxysms of this *habitual* or *cyclic vomiting*, as it has been called, are severe and exhausting and pass off gradually after lasting from one to several days. It is seen in children of gouty or nervous heredity. In *cerebral vomiting*, as a rule, the rejection of food takes place soon after it has been taken, and it is decidedly uncommon for cerebral vomiting to occur on an empty stomach. It is an early symptom of *tumor and meningitis*, and combined with headache may anticipate by a considerable time the development of further symptoms. Paroxysms of vomiting (*gastric crises*) sometimes occur in the course of *tabes dorsalis*, but they are generally accompanied with severe pain in the epigastrium and sometimes with nausea.

Nervous vomiting may be alimentary, bilious and lead to hematemesis. When bilious, repeated, and accompanied with a marked febrile state, we should think of *peritonitis* (*porraceous vomiting*), or a cerebral affection, as *meningitis*, for instance. Repeated vomiting of large quantities of *greenish mucus* is indicative of *mucous disease*, which principally occurs after the first dentition.—*Pituitous vomiting* is usually observed in *simple chronic gastritis*, but principally in *alcoholic gastritis*, on rising in the morning; it consists of a transparent, serous, acid fluid, often *whitish* in color, formed by a mixture of the gastric secretions with the saliva, swallowed during the night.—It is serous, *whitish*, riziform in the advanced stage

of cholera.—In *entero-colitis* or *enteritis,* especially *in children* and *in the aged, the gastric irritation is reflex* and the *vomited matters* are serous and discolored. In such cases, the *vomiting* is *associated with diarrhœa,* aphthæ, etc., and as in *acute gastritis,* milk should not be prescribed unless it has been boiled, skimmed and guarded with barley water, or made alkaline with lime water, for, certainly, the resulting curds will irritate the stomach, and sometimes lead the inexpert to an unsuitable remedy. This rule has most applications in infancy.

The origin of the reflex, besides the *nervous system* (meningitis, tabes, etc.) may be in the *respiratory tract* (pneumonia, phthisis, whooping cough), and sometimes *vomiting* seems to depend upon an *alteration of the blood,* producing an especial irritation of the vomitive centre (uræmia, eruptive fevers, etc.).

But, *projectile vomiting of curdled milk,* when there is a history of *dyspepsia and obvious wasting,* means always a serious trouble, and then the common attendants are, acidity, fermentation, green diarrhœa, and anal eczema. In all cases in which the child is incapable of digesting cow's casein, we should aid internal medication by taking away the casein altogether and give whey as a substitute. This can be obtained by curdling the milk with rennet and then stirring and straining it. To destroy the rennet it contains, Hutchinson advises to scald the whey before use, and as whey is insufficient alone, because it contains little fat, add one part of cream to four or eight of whey. We should not lose sight of the fact, that such intervention is almost imperative, for when a child is progressively wasting and on the road to dissolution, there is withdrawal or failure of the nutritive process and the consequence naturally is *atrophy* or *degeneration.* If our remedies, aided by proper nourishment and hygiene, cannot check these degenerative changes, that is, if a change from a lower to a higher form of tissue is not obtained the inevitable result is death, and it could not be otherwise, as the system is constantly drained of its water and robbed of its fat and other anatomical elements. The best selected food often fails to support the system, much less to arrest the ravages of catabolism, and this when, even in preparing such food, we take into account the milk-digesting-capacity of the child. Under such circumstances the child loses ground every day, for, I repeat, a tissue that is not nourished, starves, wastes and finally succumbs. I remem-

ber a case which nearly ended fatally, by the views of a Homœopathic physician of one of our seashore resorts, who would not permit the addition of lime-water to the milk of a child suffering from *acute gastritis*, for fear, as he stated, of spoiling his case, and who kept on giving ÆTHUSA for a repeated vomiting of curds, which he himself created by an improper milk-diet and which the irritable stomach could not support. This is the way some of our enthusiasts understand Homœopathy.

The forcible and inevitable expulsion of the contents of the stomach a few minutes after food has been taken, and yet no decided emaciation being obvious, is a condition frequently noticed in *young women*, who show some evidence of an hysterical tendency and menstrual irregularity. I have treated successfully with ÆTHUSA, two cases of the kind, guided by the prostration, dozing and returning appetite occurring after the paroxysms of vomiting.

Probably, in *infantile atrophy* is where ÆTHUSA has been employed with most success, and next in order comes *cholera infantum*. In both, the intolerance of milk and the exhaustion and semi-comatose condition, after vomiting or stool, have been the leading indications. But no less characteristic is the peculiar craving for a food that has been rejected, which recurs after each paroxysm of vomiting and a short period of repose. The dilated pupils, cold sweat, sunken, withered face, the green stools, tenesmus and the spasmodic hiccough, complete the syndrome of this interesting remedy.

What has led to its employment in *gastritis* is the inability of vomiting, while the severe painful contractions of the stomach last.—During *lactation*, while the babe cries, takes the breast with avidity, nurses well, vomits copiously, is exhausted, dozes, rallies, craves for a fresh supply, and does not seem to thrive; the poor mother may be a physical and moral wreck as well, full of anxiety and apprehensions; her lochia is thin and watery, her taste is bitter, she is constipated, her abdomen is tympanitic, and like her child, has no power to retain or digest milk. Under these circumstances, both, mother and child, should receive ÆTHUSA. In *stomatitis*, besides the *painful aphthæ, profuse salivation, and diarrhœa* or constipation; the *sudden rejection of the milk*, and the *temporary exhaustion and drowsiness*, after vomiting and purging, are again the indications of ÆTHUSA. It is always called for in the simpler forms, which more generally complicate a process of *dentition*.

Undue excitement of the motor centres occurring at or near the *period of dentition,* and producing general irritability of the system with strong *tendency to spasms,* should direct our attention to ÆTHUSA, whenever the *gastro-enteric condition* usually accompanying this process should comprise the *persistent vomiting of milk,* or substance resembling milk, and the short-lived or *transitory exhaustion, somnolence and reaction,* so characteristic of this drug.

It is an excellent remedy in the *diarrhœa of children* due to acidity (*lactic and butyric acid fermentation*), and attended *by gastric hyperæsthesia, intolerance of milk, and sudden ejection of this food in a curdled condition,* especially if the stools are serous, discolored, containing grains of casein, or *thin, greenish, excoriating the anus and associated with colic, or tenesmus.*

It has been recommended in *bowel-trouble of old age,* with vertigo, debility and somnolence; and in *gastric derangements of adults,* when the food regurgitates some time after eating, and then the *projectile vomiting* ensues, with tearing pains in the stomach and œsophagus, cold sweat, anguish, distress, and general debility with drowsiness.

It has been an efficacious remedy in the *spasms of dentition and summer complaint,* and other gastro-enteric troubles of childhood, with stupor, delirium and squinting; or in *epileptiform convulsions,* with clenched thumbs, red face, dilated staring pupils, foam at the mouth and trismic closure of the teeth. If *delirium* is present it may be attended by *hallucinations* (sees rats, cats, dogs, and other animals) and *auto-motor impulses* to jump out of the window.

As seen above, ÆTHUSA is essentially a remedy of childhood, but the adult and particularly the aged have been benefited greatly by it. I would not like to close this paper wilthout specially mentioning the *sensation in the back as if screwed up,* which has been so little utilized in our practice.

A FEW WELL KNOWN REMEDIES THAT DESERVE TO BE BETTER KNOWN.

JOSEPH C. GUERNSEY, A. M., M. D., PHILADELPHIA.

MERCURIUS CORROSIVUS.—Who among us does not know Mercurius corrosivus—and yet, it seems to me, this powerful ally to

the Homœopathic prescriber is often entirely overlooked in the search for a remedy to cure such urinary symptoms as "frequent urination; burning and straining in the neck of the bladder; urine scanty; urine bloody; extreme tenesmus and burning with pain in the neck of the bladder. Urethritis with a greenish discharge." Usually the routine prescriber thinks of Cantharis or Cannabis sativa or some other remedy, any or all of which he duly administers, fails to cure and perhaps even to ameliorate. Then, declaring that "Homœopathy cannot always do the work," flies the track and gives Buchu or Saw Palmetto in full quack doses—meanwhile his very good friend Mercurius corrosivus stands waiting, willing and able to cast its powerful strength into the contest and win a victory for true Homœopathy, for the law of the Similars, for those who prescribe by symptoms as Hahnemann taught.

Mercurius corrosivus is good for much else besides cystic troubles. Its provings (i. e., its symptoms) present a perfect pathological picture of dysentery in its worst and severest forms. In such conditions Mercurius corrosivus stands in the front rank, doing its best work in cases of great intensity, with much blood, and when accompanied by its characteristic urinary symptoms.

In Brights disease, with abundant albuminuria, it has such a wide range of cure and produces such satisfactory results, that it is rightfully regarded as one of the first remedies to think of—and probably to exhibit—in nephritis.

Euphrasia.—One summer when I went on my vacation, I left among my patients a severe case of diabetes. On my return home the physician I had left in charge told me the diabetic patient had very bad eyes that would not yield to treatment; that he had unavailingly tried different remedies and now was using palliatives. I found her sitting in a darkened room with a green shade over her eyes from which mucus and tears were plentifully pouring; eyes smarting as if sand were in them; intense photophobia—in fact, all her symptoms presenting as perfect a picture of Euphrasia as one could possibly find. I gave her Euphrasia 40m. in water, dose every two hours, and she began to improve immediately; pain in the eyes diminished and in three days she was sufficiently better to use ordinary daylight without the green eye shade; in less than a week her eye trouble had practically disappeared *and her diabetes was much improved also!* Had the Euphrasia been given earlier the patient would have been spared much suffering.

Euphrasia is not only an "eye" remedy, as is commonly thought; on the contrary, it is one of the best remedies we have for "catarrhal inflammation of mucous membranes particularly of the eyes, nose" and frequently the throat.

Many a catarrhal discharge from the nose, watery in character and of so irritating a nature that there is almost constant sneezing, often accompanied by cough, has been, and again can be, cured by Euphrasia. The cough seems to be caused by an *irritating catarrh* in the throat. Always remember to think of Euphrasia in all catarrhal inflammations, especially if *irritating,* of mucous membranes —particularly of the eyes, nose and throat, the discharge being abundant in amount and watery in character.

Opium.—Opium, in potentized form, is one of the best remedies that I know of in our Materia Medica, for chronic constipation. I have used it so successfully for that condition, so many times, that it is almost always the first curative agent to come to my mind when treating constipation. The chief indicaion for its use seems to be an entire absence of desire for a stool and not the slightest inconvenience is felt even if there is only one passage in a week. We know Opium to be a destroyer of pain and sensibility; it renders one numb to pain, and that is the keynote to the Opium constipation. As admirably stated in the *Guiding Symptoms,* "want of sensibility, hardly any inconvenience is felt from accumulation of fæces; absence of expulsive efforts; after abuse of cathartics; the most active purgatives have lost their power." The stools come in small, hard pieces which are dark brown or black. Also acute constipation caused by fear or fright. Opium, potentized, should be given insistently and persistently in all cases of old, stubborn, seemingly incurable cases of constipation, before resorting to palliatives or patent medicines.

DIGITALIS AND A FEW OTHER HEART REMEDIES.

AUG. KORNDOERFER, SR., M. D., PHILADELPHIA.

In presenting this brief review of a few of our heart remedies, I desire to emphasize the importance of carefully differentiating the use of appreciable, though still small, doses of our remedies, and the potentized preparations of the same. We shall center our at-

tention upon Digitalis, concluding, however, with a few practical remarks upon the use of several other remedies.

Digitalis, next to opium, probably has been more lauded and more condemned as a therapeutic agent, than has any other drug of our materia medica. In our own school, this may be attributed to a lack of careful study of its pathogenesis. In the old school, it more likely depends upon the fact that the dosage employed, renders its use hazardous to the patient and about equally disappointing to the physician.

The physiologic interpretations of its action hitherto advanced, though affording interesting speculative studies, have been discordant, unsatisfying and confusing. This, no doubt, is attributable to the common error, of attempting to utilize drug experiments made upon the lower orders in the scale of animal life, in an endeavor to discover the therapeutic medicinal action of such drugs upon man. Such attempts must always prove misleading and untrustworthy unless confirmed, or corrected, by provings upon man.

Among all the theories advanced in regard to Digitalis, the most recent, and, to my mind, the most plausible, is that maintained by Sajous, in his masterful work upon the Adrenals. He there unfolds an entirely new, and apparently true, explanation of the phenomena resultant upon the use of physiologic, as well as toxic doses of this drug, with special reference to its action upon the heart and its influence upon blood pressure.

According to his views, Digitalis stimulates the activity of the anterior pituitary body, which in turn arouses the suprarenal glands to their highest functional possibilities.

In order to appreciate the significance of this fact, we must bear in mind that the adrenals secrete a colloid substance that possesses a marked affinity for oxygen, and that this substance enters the blood-stream and reaches the lungs as a constituent part of the venous blood.

"When the secretion of the adrenals reaches the pulmonary alveoli, it absorbs oxygen from the air and forms with the oxygen a compound or oxidizing substance." "A part of this oxidizing substance is absorbed by the hæmoglobin of the corpuscles and the balance remains in the blood plasma." "This oxidizing substance is the reagent to which the oxidation processes that occur in the blood-stream are due." Further, it has been demonstrated that "the injection of suprarenal extract produces a rapid and marked increase

of blood pressure, by stimulating the cardiac and vascular muscles," that is to say, exciting the muscular fibres to contraction. We must note the fact, that the adrenal secretion reaches the heart by way of the suprarenal veins and inferior vena cava acting directly upon the heart muscle, increasing its power; "this increase of contractile energy normally implicates a slower action in virtue of familiar mechanical principles." Another feature of importance in this connection is the fact that the vessels supplied with a muscular coat and the capillaries, are antagonistic in contraction and dilation. Now it has been proved that "overactivity of the adrenals causes contraction of the central vascular trunks and engorgement of the peripheral capillaries, as indicated by general peripheral hyperæmia, which assumes the stage of fever when toxics accumulate in the blood stream; whereas insufficiency or the adrenals is followed by engorgement of the central vascular trunks and depletion of the peripheral capillaries, as indicated by general pallor."

Physiologic experiments prove that Digitalis manifests its action notably upon the right heart, directly increasing its contractile energy and ensuring a freer circulation through the lungs.

Given in doses capable of exciting suprarenal overactivity, Digitalis occasions marked rise of vascular pressure. At first we note a slowing, strengthening and hardening of the pulse, but later the pulse becomes dicrotic. This, says Sajous, "is a suggestive fact, a primary warning perhaps," for at this time suprarenal insufficiency may suddenly manifest itself and death occur as a result of exhaustion of the suprarenal centre, with arrest of the heart in diastole.

If such termination does not immediately occur the ventricles and auricles cease to beat in acord, in other words, auricular ventricular arythmia occurs, and the condition known as delirium cordis soon develops, when further use of the drug must prove fatal.

The slow pulse following the administration of Digitalis evidently is the result of increased action of the suprarenals; whereas the subsequent rise in the pulse rate depends upon suprarenal exhaustion. These physiologic phenomena furnish valuable indications for differentiation of dose in the therapeutic use of this drug, and should serve as a warning against excessive or protracted stimulation.

Antipathically, Digitalis may become a useful bridge over which to bring a patient suffering from serious cardiac conditions, where the heart muscle fails to perform its allotted work; especially, when through inability of the right heart to propel the blood through the

lungs, venous engorgement and œdema have developed. In such cases Digitalis, by increasing the systolic contraction and lengthening the period of diastole, temporarily restores the physiologic cycle. From this standpoint, we are warranted in employing appreciable doses of Digitalis until impending danger has passed; but we must remember that great care and ripe judgment are necessary, to protect the patient from at least equal danger in the overuse of this drug.

Many have found good results from drop doses of the tincture, given at short intervals until reaction becomes manifest. In my own practice, I prefer the preparation known as Digitaline, Merck's German. This has been carefully proved in physiologic doses, and its cardiac symptoms are found to be practically the same as those derived from the tincture, whereas, its use is unattended by the nausea so frequently observed from the tincture and the decoction. It may be relied on in doses of the one-hundredth to the one-fiftieth of a grain, repeated every two hours, until its action upon the heart in the slowing and strengthening of the cardiac impulse becomes apparent.

While recognizing and appreciating the value of Digitalis when employed in accordance with this relatively crude method of selection, I, nevertheless, must caution against placing dependence upon it, to the neglect of the strictly homœopathic application of the remedy.

The pathogenesis of Digitalis given us by Hahnemann in the Materia Medica Pura, affords the most reliable data on which to base a prescription. A short analysis will make this plain.

In reviewing the recorded symptoms, one of the most characteristic is found in the pulse. Where the remedy is indicated homœopathically, we will find a decidedly slow pulse, but qualified by the modality, "marked acceleration of the usually slow pulse on the slightest exertion, such as when walking even slowly, or when rising from a recumbent or sitting posture." This modality is so characteristic, that, if it be not present in a given cardiac case, Digitalis may almost surely be ruled out.

Again, we have the sense of great general weakness, a distressing sense of exhaustion, with tendency to attacks of syncope. This symptom stands in close physiologic relation to the condition of the circulation indicated by the former symptom. This weakness may manifest itself as a sense of heaviness and paralytic weakness of

the limbs, especially of the left arm; or, at night during sleep, a sense of exhaustion may awake the patient in a fright as from a dream, with a feeling as if falling from a height, or into the water. Of similar import is the symptom, "awakens frequently during the night with anxiety, and a feeling as if it were time to arise." This symptom often occurs in neurasthenic patients, and evidently is dependent upon a sudden weakness of heart's action during sleep. Fear is marked, a fear of impending danger, or death, accompanied by faintness and vertigo on the slightest movement.

Strong emotions invariably excite the heart's action in Digitalis patients. Based upon this modality, Digitalis has been successfully employed where, after intense grief, the patient suffered from palpitation of the heart accompanied by pain in the left chest and the left arm. In such cases the potencies should be used.

Respiration is difficult and is accompanied by a deep hollow cough, dry in the morning but with expectoration of small quantities of yellow jelly-like mucus in the evening. The cough is aggravated by talking, walking, or by any exertion. Pulmonary congestion and œdema are of frequent occurrence.

Peculiar, seemingly rheumatic pains in the chest point to Digitalis, especially when occurring in cardiac affections after renal complications have developed. The urine is scant, dark and turbid, and may deposit a sediment resembling brick-dust.

The interference with the portal and renal circulation develops a sensation of soreness in the region of the liver, and a severe aching in the small of the back.

In many cases we find frequent desire for stool and an urging to urinate, both, however, failing of satisfactory results.

Dropsical symptoms are by no means uncommon, but I cannot speak favorably of Digitalis in this condition when renal degenerative changes are marked.

In cases of valvular disease with marked dilatation and failure of compensation, accompanied by general dropsy, I have observed favorable action on the heart follow upon the use of drop doses of Digitaline in the second decimal dilution. The heart's action becoming stronger and less influenced by slight exertion, the patient experiencing marked relief, but the dropsical symptoms failed to improve. In these cases Apocynum cannabinum tincture, in doses of

from five to thirty-five drops every two hours, brought speedy and lasting improvement.

True, we cannot expect a radical cure in such cases: the crippled condition of the valves of the heart, the impaired heart muscle, and the at least beginning degeneration of the kidneys, combine to make this impossible. Nevertheless much still may be accomplished through the development of compensatory changes in the heart structure, thus securing physiologic relief to lungs and kidneys.

Although I have spoken especially of the use of Digitalis in the lower potencies, I do not wish to be understood as discouraging the use of the higher, especially in neurotic patients characterized by the Digitalis cardiac symptoms. In such cases, the best results may be expected from the use of potencies ranging from the sixth to the thirtieth.

Digitalis has been so long and so favorably known that I fear other equally useful remedies are frequently neglected. The present opportunity will permit of but little more than the mention of a few of these, nevertheless I cannot resist a few words upon that wonderful polychrest introduced by Rubini, the Cactus grandiflorus. This remedy is frequently indicated in inflammatory conditions of the heart. The characteristic indication for its use, is found in a sense of constriction in the heart, as if squeezed or compressed by a band, or, as Lippe gives it, "as if an iron hand prevented its normal movements." A similar constrictive sensation may involve the entire chest, causing it to feel as if bound, hindering respiration.

Violent suffocative attacks may occur, the chest feeling compressed; these attacks are accompanied by fainting, cold perspiration on the face and loss of pulse.

Many other valuable symptoms will be found in the pathogenesis of Cactus, but this constrictive sensation is the characteritsic that gives type to every cardiac group. Around it all the other symptoms center, and without it Cactus rarely, if ever, will prove homœopathically indicated in heart affections.

Kalmia is another polychrest of great importance in diseases of the heart. It is especially indicated in rheumatic and gouty forms of such diseases. Its pains are very intense, involving the left chest and extending down the left arm. One of the most frequently confirmed characteristics is the tendency of the pains in the cardiac region to shoot downwards towards the stomach, or into the abdo-

men. Other symptoms of great worth are: Wandering pains in region of the heart; shooting pains above the heart through to the scapula; paroxysms of anguish about the heart, dyspnœa, febrile excitement. The pulse usually is slow and weak; it may be scarcely perceptible. Kalmia is frequently indicated in rheumatic endocarditis with valvular disease and consequent hypertrophy. It follows well after Spigelia.

Spigelia will prove serviceable in cases of mitral insufficiency of rheumatic origin, when characterized by the following symptoms: Stitching pains at the apex of the heart, but seemingly more superficial, with each systole of the ventricles. Unusually strong beat of the heart, the patient complains of hearing the heart beat. In some cases a purring feeling over the heart is experienced; or a wave-like motion not synchronous with the pulse. Palpitation, aggravated by bending forward, or from the least motion. Dyspnœa, very distressing, brought on, or aggravated by moving in bed, or even raising the arms; the patient must lie on the right side, or with the head high.

Apocynum cannabinum deserves special mention, because of its marked influence over the dropsical conditions developed in many heart cases. The heart's action is scarcely perceptible; the pulse is small and irregular, dyspnœa is severe, the patient scarcely can speak; the urine is scanty, dark, and may contain albumin.

Aconitum, Ammonium carb., Arsenicum, Bryonia, Lachesis, Naja, Veratrum album, Veratrum viride, and a score more of our remedies should receive mention, as they all have earned a place in our homœopathic armamentarium by reason of intrinsic merit, clinically demonstrated in confirmation of their pathogeneses, but time forbids.

A word in closing, upon the differentiation given us by Weihe, in his little pamphlet, "Topographische Beschreibung der Schmerzpunkte,' Stuttgart, 1891. Accordingly to these provings, Cactus shows a characteristic pain on pressure at a point, "on a line with and just to the left of the outer border of the left nipple." Kalmia is characterized by a pain-point "directly above the left nipple." Spigelia has a similar pain-point "midway between the costal cartilages and the tip of the xiphoid process."

The diagnostic pain-points of many of our remedies have been thus differentiated, and would afford interesting material for discussion in some future paper.

KALI CARB., AND SOME OF HIS RELATIVES.

JULIA C. LOOS, M. D., H. M., HARRISBURG.

Materia Medica Valley spreads between the peaceful, free land of Health and Happiness and the unhappy land of bondage to abnormal vital force, called by that relic of barbarism, Disease. Under the sway of the royal princess Doctrinæ Homœopathicæ, its beauty wealth, power and renown for doing good have been phenomenal, far surpassing the fondest dreams of any, in the days of its former ruler, Polypharmacy.

The secret of its present contentment, ambition and power is the encouragement given to development of knowledge of the laws of Nature and development of individual desires, interests and abilities with consequent responsibility of all in their individual fields of work.

Most refreshing and encouraging is a sojourn in this valley to him who in the love of Nature and the laws of life seeks solution for the problems presented for his investigation, ever less knotty as he emerges from the pale of superstition. He turns from the self-termed scientists of bacteria-serum theories, from the diagnosis-prating wiseacres (of doubtful wisdom) and from all kinds of specialists who stand in the full stature of "personal experience" theories, without knowledge of Nature's law of cure, who declare the more they know of medicines the more they value the doctor's advice above any medicines he may give, for in them is no power to heal the sick, only crutches for their weaknesses and mufflers for their cries of pain. These speak of drug forcing, but it is a delight, unknown to them, to meet the enthusiastic dwellers of Materia Medica Valley, floating the Hahnemannian standard, inscribed "Similia Similibus Curantur," who *know* their power in rendering service to those seeking the broad acres of pure "Health."

On a warm, sunny slope, sheltered by the hills from cold winds, amid the old trees of the burned birch grove, is the home of Kali carb. Developed by the burning trees this composite fellow is dependent on heat for comfort. Within the dwelling may be found all known conveniences for applying heat, as cold air, becoming cold and cold weather distress him, although he prefers cold diet to

warm, and cold water relieves the rectal burning sensation which he sometimes suffers from nerve exhaustion. Drafts are especially an abomination to him and his, and so you find Mr. Kali c. with a skull cap, his wife, providing shawls and coverlets for convenience anywhere, while the little Kali c.'s are early trained to adjust doors and screens to avoid drafts.

They also avoid dampness which, with cold, emphasizes their susceptibility, indicated in severe coryza or inflammation of mucous membranes of pharynx, larynx and thorax. These and all complaints are accompanied by stitching pains, changing from place to place. Covering the painful part relieves it but the pain appears in some unprotected part.

You may not find the entire family busy at any one time, for any of these Kali c.'s is liable to a paroxysm of exhaustion, especially when chilly, with the sensation that he must recline, if it be only for a few minutes.

These interesting people are inclined to flabby obesity, though some of them are reduced, through vital strain or loss of vital fluids; but the pale, white or sallow skin and lassitude tell of anæmia. While their acquaintances expect to hear of the stitching pains, less intimate ones or even casual observers, sometimes recognize them by the peculiar swelling above the eyes, between the eyebrow and upper lid which is not an œdematous eye-lid and exists when no other swelling is observed. There is, however, tendency to swelling in the extremities and other parts hinting of burdened heart action.

With many complaints, these people suffer difficult respiration; dry asthmatic, oppressed, wheezing; forcing them to lean forward with head on knees in the effort to relieve the sensation of suffocation. When suffering an aggravation from the effect of cold, there are hard paroxysms of cough, violent spasmodic, suffocative, fatiguing, either dry or dislodging lumps of foul-tasting mucus, at times provoking vomiting or retching.

After the little Kali c. girls had measles, such a dry cough persisted. The father dates his cough to an attack of pneumonia in the lower portion of the right lung and declares he has never been free from stitching pains in that side, since.

He has watched his son through so many periods of illness when pulmonary inflammation progressed to ulceration, that he claims full

mastery of the subject. It is claimed, in the valley, that there are few sufferers of this affliction who are not benefitted by Kali c.'s ministrations, some time in the course of their disturbance. Few, it is said, can recover entirely without him.

The little boys had pertussis. Like all Kali c.'s with any cough, they awakened at 3 A. M. with the hardest paroxysms and most severe stitching pains through the thorax, associated sometimes with copious vomiting.

No Kali c. has a happy disposition. He is queeer, difficult to comprehend and more difficult to please. How can the family exist in any sort of peace with such variable moods? They are always discontented with something, even themselves, and, of course, with each other. Unless necessity demands it they never work or rest alone. Without company, they are fearful and anxious; tortured with imaginations of possible calamities; dreading fire, burglars and accidents, most remote. If you touch one of them unawares, he is startled and annoyed. Often he has the sensation of fear referred to the stomach, though he cannot explain how or why.

This family never has an entire night's rest. Some complaint arouses each one about 3 A. M. or some time between 2 and 4 A. M. Pains, dyspnœa, diarrhœa, something demands attention. This early morning habit is so well known that suffering travellers often appeal, at this time, to Kali c. for aid.

Mrs. Kali c. suffers from pains in the back, beginning in the lumbar region, extending to the buttocks and down the thighs. During parturition with each uterine contraction comes this pain extending down the thighs, thus reducing her expulsive power. From over lifting she has a threatening of abortion and then suffers most severely in this way.

She is subject to paroxysms of intense indigestion which may commence immediately after eating or waken her at the usual morning hour. There are distressing pain; much flatulence (eructations and much distention), sensation of fullness, heat and severe cutting, so that she sometimes sends for one of her neighbors, especially efficient in such sufferings to help her through the paroxysms, saying she cannot suffer it alone.

As these people advance in life they reveal a marked gouty tendency, but even before the joints become enlarged, the tearing, stitching pains disturb them day and night, > by covering, < from

cold and drafts. When at length the joints are enlarged and stiffened, poor Kali c. cannot overcome it. When called to aid others, in similar plight, for whom his sympathies would appear best to fit him, he becomes so vehement and strenuous that the poor victims are worse afflicted after, than before, his ministrations. His cousin, Kali iod., when called in such conditions, if in sympathy with the sufferers, is mild and gentle and comforting, but Kali c.'s best acquaintances give word of warning that although he could prevent these enlargements if called early enough after they have developed he should be shunned by the gouty sufferers.

Kali bichromicum is less quarrelsome than his cousin. He resembles him in the early morning habit, but lends his own variation. Rousing at 2 A. M., he remains awake, and often suffering until 5 A. M., then returns to rest and sleep. While he has some chilliness, his complaints characteristically develop in warm weather. Eruptions appear as the warm season approaches, continue troublesome until autumn and as winter approaches improve, making little or no manifestation through the cold weather, but return with summer time. He is most comfortable in the open air and prefers exercise out-doors. He locates the painful parts very definitely. They are often in isolated spots that can be covered by the end of a finger or start in such a spot and extend along the course of a single nerve or locate in one point at a time. Pains locate in various parts of the body in succession, leaving a sensation of soreness when the actual pain has gone, as with rheumatic joints, affecting different joints without cessation in those previously affected. When Pulsatilla wanders from place to place she leaves no such traces.

Metastasis is even more extensive with Kali bich. Gastric symptoms develop as the gouty joints recover ease and as *they* disappear there are catarrhal inflammations of nostrils, pharynx or elsewhere. No mucous membrane is exempt and the discharge is characteristic from all. This is copious, thick, greenish-yellow, stringy, tenacious mucus. Ulcers are covered with thick, tough membrane. When the son acquired syphilis these family marks characterized the catarrh and ulcers of the fresh miasm.

The children are chubby and short-necked and subject to paroxysms of membranous crop. The larynx is the site of chronic catarrhal inflammation, rendering the voice deep, hoarse, rough, so that it may lead to their identity, even in the dark.

Kali bich. suffers from drinking too much beer. Some say his obesity is due to this. Certain it is that he suffers diarrhœa from it and aggravates his rheumatism, probably, thereby. Withal he is a prominent worker in the Valley, and most happily, for those whom Lachesis and Arsenicum have served well. There is a pleasant rivalry between him and Phosphorus to serve those coming from Arsenicum.

Causticum's relation to these two is by marriage ties, as her characteristics hint. She is more gloomy than Kali bich., her anxiety is more hopeless than Kali c. At times she cannot escape the sensation of something dreadful to happen. Mr. Caust.'s business cares wore heavily on him; after struggling long against hindrances and vexations, the mental powers weakened and tired in body and mind, he was forced to yield to financial loss. With Mrs. Causticum the grief of this, the long care of the irritable, censorious husband and much night care of the children characterize her life. She says nothing so wears on her body as long-lasting fears and vexations, and prolonged sorrow.

The cloudy and damp weather that aggravates the complaints of Kali c. and bich., occasion her cheerfulness and increase her energy; dry weather, that brings amelioration to their rheumatism, aggravates hers and causes mental depression. Exposure to cold dry wind is followed by facial paralysis.

Weakness is not only a sensation with Caust., but a paralytic state. Gradually increasing, trembling weakness of the extremities, optic, vocal and auditory paralysis, stammering, post-diphtheritic paralysis, chorea (from fright or suppressed eruptions), involuntary rectal evacuation, both retention and involuntary evacuation of urine, indicate the disposition to paralysis in single nerves. Mechanical injuries cause paralysis instead of flesh bruises. The family cat remembers to avoid neighbor Nux's dog since she was caught in the back and shaken, by him, for she cannot hold her weight on her hind legs since that affair.

The mucous inflammations of Caust., with discharges resembling those of Bich. (copious, yellow, tenacious), are also marked by sensation of inability to cough deep enough to reach the mucus and inability to expectorate it when loosened from the respiratory tract or from the pharynx. It slips into the œsophagus. With the cough there is sensation of much heat in the chest, in a streak down the

trachea, also a general flush of heat and involuntary urination. With inflammatory condition in the stomach, the sensation of heat is as rising from slaked lime.

Caust. cannot drink coffee or cooling beverages without aggravation of her complaints, but a drink of cold water will ease the pains, or the cough, and if taken soon enough will often prevent a paroxysm of cough.

The early night is the uneasy time in the Caust. home. The chorœic twitching of the girls, enuresis of the little boys, water to be supplied to those with cough, her husband's rheumatic pains and her own restlessness serve to keep Mrs. Caust. from sleep, until late.

Rheumatic pains are as severe as in the other Kalis: tearing, drawing, pains accompanied by cramping of muscles and contraction and induration of tendons, in the extremities. In parturition, this mother, unable to change position, cries, "hold my back, the pains all go to my back." They do not extend down like Kali c.'s.

Her troubles did not cease with parturition. Pressure on the nerves in the pelvis resulted in paralysis of one leg, even though no instruments were used. Fissures developed in the nipples according to Caust.'s tendency to ulceration of this sort.

Ulcers, anywhere, with her, are liable to become fistulous, with hardened edges, burning and itching sensations. If you see the skin disfigured by pimples, crusty eruptions and even condylomata on face and hands, you may know it for another evidence of the Caust. nature.

These are but brief hints of the most pronounced features of the three Kali friends, leading to a more extensive acquaintance, well worth the trouble to cultivate, as repeated evidence supports the claim that each one is best fitted to relieve most promptly, mildly and permanently, all those with whom his sympathies agree.

A FEW COMPARISONS.

C. S. MIDDLETON, M. D., PHILADELPHIA.

With the experience covering nearly 45 years—since walking down the aisle of the graduating hall, with my sheepskin under my arm—noting the important change which seems to be gradually taking fast hold of the profession in regard to the use of our inesti-

mable Materia Medica, it seems obligatory upon some of us to hold up a warning signal, and to call attention to the much-neglected study of the comparative effects of drugs in diseases.

The finer differentiations of the early period of Homœopathic therapy with which I first became acquainted, seem to have been lost sight of to a most serious degree, if facts which we often observe count for proof—namely, a neglect to select the indicated remedy, and the substitution of the easier (?) method of "getting results"—either from palliatives of Homœopathic remedies, carelessly selected,—or from anodynes, narcotics, or patent analgesic products.

Occasionally, either favorite and reliable remedies—even polychrests—have been supplanted of late years by other drugs not so well established in our confidence, for the treatment of certain diseases and conditions—often, in our estimation to the disadvantage of both the patient and the doctor.

There are also certain drugs, the similarity of which is so close, that to make a selection needs the finest distinction to satisfy ourselves that we have correctly decided.

When drugs possess such notable similarity, it has often been very perplexing to those of us who desire to be right—(and who does not?)—to select the truly indicated remedy.

It is with the thought of making a few points clearer, perhaps, by comparing some drugs which have been lauded in certain diseases above some older and tried remedies, and possibly thereby aid one to decide satisfactorily, that has led the writer to undertake this task. For instance, Ferrum phos., has been recommended in the past few years as a superior remedy to Aconite in pneumonia.

This cannot be accepted in such a broad sense. As in all other instances, they each have their indications, wherein no other drug can be of the same service.

It is not the aim of the writer to be exhaustive in these few comparisons, but merely to open the subject for thought, and discussion, neither shall we attempt fine distinctions of pathological differentiations. In comparing these two remedies for indications in pneumonia, we find that Aconite is required for inflammation of the lungs following a severe chill—the more severe the chill, after exposure to a cold wind, and inclement weather, the better indicated is Aconite. Strong robust constitutions; the fever is liable to be

very high, hot dry skin; great thirst, white or yellowish coated tongue; rapid, hard, quick pulse, labored breathing—either from the excessive action of the heart—or from hyperæmia of the lungs as a consequence. Delirium active or violent, great restlessness; and we must not forget the "fear of death"—which, however, all Aconite patients do not have. Hard, dry, painful cough, pain in the chest, or bronchi, crepitant rales, but expectoration scanty, thin, sometimes frothy, streaked, or mixed with bright red blood: nose-bleed. These symptoms are indicative of the first stage of pneumonia, which may rapidly pass into active and alarming congestion with threatened cardiac paralysis, in which Aconite is still a grand remedy. There may be neuralgic pains, or even rheumatoid affections of some of the joints.

Ferrum phos. is recommended for the first stage of pneumonia in children, particularly from checked perspiration; fairly high temperature; little or no thirst; pulse full, but soft. Delirium not pronounced, but mind confused, talkative, easily irritated. Weak anæmic constitutions; blood dyscrasias; passive, and secondary congestions; secondary and prolonged attacks; inflammation passing from one to the other side; rales, cough with less soreness than in Aconite; expectoration is more free, frothy, pale pinkish, or quite bloody; slight or free hæmorrhage, nose bleed.

From the above compilation, it seems to me there ought to be very little difficutly in selecting the better suited remedy. Of course there are many collateral symptoms that may be present—which it would be impossible to indicate now, which might influence a choice.

There are two remedies, the action of which upon the bowels resemble each other very closely—namely, Croton tig. and Gratiola off. You are all familiar with the sharp, severe, cutting pain and rumbling of Croton tig., the thin, profuse, yellowish, and sometimes greenish watery stools, *coming out like a shot,* and aggravation after eating and drinking. The Crot. tig. condition is usually one of severity, and great suffering.

Gratiola possesses in a marked degree most of the symptoms of Croton, but while there may be great rumbling and discharge of flatulence and stool similar in characteristic appearance, even to the expulsion, the Gratiola stool is different from the Croton stool in being often *painless,* or but slightly so, and comes out with *force, like turning on a hydrant,* and continues until the bowel is emptied

for the time being, and that is the last of it until the next time. As in most diarrhœas of a colliquative character, there is often great thirst, aggravation from drinking, however; tongue coated whitish, and covered with mucus.

The Croton condition is always painful, while the Gratiola is *very* much less so—or *entirely painless*, and the coming out "like turning on a hydrant" is to be differentiated from the "coming out like a shot."

In the same way it might be interesting to compare briefly three of the most important of our remedies for dysentery—namely, Aconite, Nux vom. and Mercurius cor. Both Aconite and Merc. cor. are required most frequently during the season when the days are hot, and the nights are cool. The Aconite case is often preceded by a chill, high fever and characteristic pulse, great thirst, restlesness, fear, stools scanty, loose, brownish, yellowish, blackish, fetid; like chopped up herbs; bloody, and pure blood without feces, painful and severe tenesmus; rheumatic or neuralgic pains may be an accompaniment, as well as delirium.

Merc. Cor.—Constant cutting pains in the abdomen, and intolerable straining and tenesmus, with discharge of bloody mucus day and night; the severe pains in the rectum continue after stool; prostration, cold sweats, weak pulse, collapsic symptoms, tenesmus of both bladder and rectum. Tongue coated whitish brownish, with imprint of the teeth along the edge; offensive breath, syphilitic subjects, necrotic teeth; disposition depressed, aggravation from eating, or drinking cold fluids.

Nux Vom.—Quarrelsome, irritable, violent stubborn dispositions; hypochondriacal, oversensitive; in those using alcohol as a beverage.

Attack preceded or accompanied by stools of small scybala, covered with mucus, and bloody, with colicky pains; stools blackish, like pitch, blackish blood, severe tenesmus, *ceasing after stool.* Hæmorrhoids; frequent ineffectual desire for stool, with feeling as if more remained in the rectum. Fever moderate. Aggravation in the morning, and from mental exertion.

It would seem to be easy to make a choice between Nux vom. and the other two—but rather more difficult to differentiate Aconite and Merc. cor., but, if we bear in mind the more sthenic symptoms of Aconite—the higher fever and delirium—contrasted with the unrelieved tenesmus after stool, the greater exhaustion, and

scorbutic conditions calling for Mercury, there ought to be no difficulty.

In hyperæmia of the brain, meningitis, delirium and insanity, we have at least three important remedies, which may at times, require great circumspection to differentiate, namely, Belladonna, Hyoscyamus and Stramonium. Perhaps there are not three other remedies in the materia medica so closely allied as these three, and as a consequence, not any other three so difficult of differentiation.

Belladonna is characterized by meningeal inflammation, cerebral congestion, high temperature, dry, hot skin (or moist), hot head (cold feet), flushed face, throbbing head, violent frontal pain, violent delirium, vehemence, scolds, demands, furious rage, tries to bite and strike. Dry, red or whitish tongue, great thirst, vomiting, wakefulness or loss of consciousness, starting from sleep in fright, anxiety, timidity, restlessness, desire to get out of bed, convulsions (in scarlet fever), eyes protruding, sparkling, staring, widely dilated pupils. Aggravation by noises, light and motion.

Hyoscyamus will be of the greatest use in complete loss of consciousness, answers questions properly, but relpases into stupor and delirium, desires to get out of bed, illusions, hallucinations. Picking at the bed clothes. Lascivious mania, uncovers the body, especially the sexual organs, and sings amorous and obscene songs. Mania with ludicrous actions. Foolish laughter with animated and hurried talk. Delirium without apparent heat, face pale and limbs cold but temperature high.

Eyes wild and red, sparkling, squinting, stupid staring. Pupils dilated rather than contracted. Dryness of the mouth, paralysis of the tongue, consequent difficulty of speech.

Confusion of the head and vertigo, as from intoxication. Pressing, stupefying pain in the forehead. The brain feels as if is were loose, swashing sensation in the brain.

Cases of disappointed love, with rage, or jealousy, may be an element in the delirium, or insanity requiring the use of Hyoscyamus.

Stramonium has a long account to its credit. Vertigo, cannot walk in the dark, falling to the left, or backward; reeling as if drunk. Violent congestion in the head, heat in the head, and pulsating about the vertex and in forehead, fainting and loss of sight and hearing, face bloated and turgid; convulsive movements of the head, mostly to the right side.

Delirium, furious, but full of fear, tries to escape. Struggles to get out of bed. Laughter. *Incessant, incoherent talking, passing rapidly from one subject to another, without relation.* Sexual excitement. Varying moods. Terrified, merry. Desire for light and company. Rage with beating or striking, scratching, biting, screaming.

Proud, haughty, exaltation, singing, dancing. Hallucinations which terrify the patient. Horrible images, sees strangers, or imagines horrible animals are jumping sideways out of the ground at him.

Excessive aversion to liquids. Water or a mirror or anything bright excites convulsions. Spasmodic constriction of the throat.

On awakening, frightened at anything that first meets the eyes, wants to run away. Eyes wide open, staring, brilliant, contorted, sometimes immovable and insensible to light. Conjunctiva injected. Transient blindness. Face hot, red, bloated, with expression of terror. Tongue swollen, stiff and dry, moved with difficulty, stammering, or entirely speechless. The fever of Stram. resembles that of Bell. in being very high, but in the fever of the former (Stram.) it is not so long continued, and is accompanied by coldness of the body, especially the lower limbs. Sometimes cold sweat all over the body. Now with such a mass of similar symptoms, how are we to differentiate in any given case, be it ever so serious or innocuous?

Belladonna undoubtedly has a more profound action upon the cerebrum and the meninges of the brain than either Hyoscyamus or Stramonium, producing great and serious pathologic states of that organ, accounting for the intense pains (frontal) and throbbing in the head, raging, violent delirium, convulsions and exceedingly high temperature.

Stramonium is a close second to Bell. in the mental excitement and sensorial manifestations, apparently falling just short of inflammatory conditions, but still having very high fever, violent delirium, with fear, aggravated by bright light and difficulty in swallowing liquids owing to constriction of the throat, while the difficulty in swallowing from Belladonna poisoning is due to inflammation, the aggravation by bright and intensified light being sufficient to cause the patient to pass into convulsions, which is not the case in Bell., where we have an increased irritation to a brain congested, or inflamed meninges. The incessant talking, rambling from one subject to another, without bearing any relation to each

other, which we frequently meet in fevers and mental diseases, is a most marked indication for Stramonium.

Hyoscyamus seems to occupy a middle ground between Belladonna and Stramonium, there being less indication of inflammation in the one instance, and in consequence less violent delirium; in fact, the latter is of the low, stupid form, frequently muttering, staring, asthenic character in typhoid fever, picking at the bed clothes and at imaginary objects in the air, with other hallucinations and illusions, as to horrible images, animals, etc., which makes Hyoscyamus as well as Stram. a most excellent remedy in delirium tremens, but Stram. will have constant wandering talking, while the Hyoscyamus case will be of a lower muttering type with frightful hallucinations. All the various forms of mental aberrations in Hyoscyamus, in fact, seems to point to irritation of certain sets of nerve centres, such as those causing the patient to revel in obscene thoughts, excitation of some spinal and muscular centres; therefore, Hyoscyamus becomes a most valuable remedy in bulbar paralysis and paralysis agitans, as well as for nervous conditions due to irritation of the sensory tract.

The selection of one of these drugs as indicated in a given case may be largely aided by a correct diagnosis, but after all only a close differentiation of the symptoms can lead us to a certainty.

MATERIA MEDICA STUDY.

WILLIAM A. SEIBERT, A. M., M. D., EASTON.

"Every person," says Gibbon, "has two educations, one which he receives from others, and one, more important, which he gives himself." It is far from the purpose of this paper to encroach upon the sacred realm of our instructors. May they be given more and more ability to not only satisfy the exactions made of them by others, but also to come nearer satisfying themselves. Studying, on the other hand, is emphatically what one does for himself, and this is our theme.

The object of studying is the acquisition of knowledge, the comprehending, the remembering, the recollecting at the proper time. Memory is the fundamental basis of all knowledge, and the culti-

vation of the memory is the labor of the student. The labor of cultivation of the memory consists pre-eminently in the *exercising* of the memory, and in so doing it is necessary to observe certain fundamental principles that are absolutely essential. These principles are:

1. To grasp the thought fully, clearly, definitely.

2. To connect it with other things that are known, so that you may have something to recall it by.

3. To frequently revert to it, until you are sure that it has become a permanent possession, and one which you can recall by any one of numerous connecting links.

In other words, comprehend fully first of all, then compare, and lastly repeat unsparingly, and thus satisfy the object of studying.

To comprehend a thought fully, we must analyze and classify it, and this process, with reference to the cough of Aconite, was reveled in in a recent paper read before the Philadelphia County Society. We there suggested that the analyzing could very pleasantly and profitably be still further elaborated by comparing the many and various works and compends on materia medica, thus learning clearly and definitely the opinions and explanations of the various authors respecting the cough of Aconite. We would add that this work of comprehending could be carried still further by reproving, applying the most modern instruments and methods of the present day laboratory, and using any additional means of elucidation; but a study of any subject in materia medica, as of any other subject, is never finished until the three fundamental principles of study we have enumerated are fully satisfied.

The present paper means to take up the remaining two principles in the acquisition of knowledge, viz., comparing Aconite cough symptoms, and repeating frequently. These papers shall have served a collateral purpose eminently if they expose the folly of taking up any materia medica, reading the symptoms and committing them to memory, and at the same time entertaining the delusion that you are learning the remedy or materia medica; furthermore, that any living being can ever learn all of the materia medica or even all about Aconite, any more than he can learn the dictionary or encyclopædia. One of the best accessories to a materia medica student's sanctum might be a poll parrot that would continue saying incessantly, "Analyze, classify, compare, repeat."

In the previous paper referred to was outlined what appears to us to be a satisfactory method of investigating and learning the homœopathic materia medica without offending the present day student's scientific trend of thought, and yet without vandalizing our homœopathic materia medica; if possible, to create a fascination for this kind of work; to disabuse a surprisingly prevalent opinion that there is a lack of uniformity in our materia medica; and, finally, to impress the fact that Homœopathy will respond to scientific tests when intelligently applied.

The method consists in analyzing, for illustration in this instance, the cough symptoms of Aconite. Every cough symptom of Aconite found in any materia medica is analyzed and classified into—

1. Character of cough.
2. Exciting cause and its location.
3. Conditions accompanying and following the cough.
4. Conditions of aggravation and amelioration.

The "Materia Medica Pura" contains all the symptoms observed and collected by Hahnemann and his disciples; Allen's "Encyclopædia of Pure Materia Medica" contains a record of all the positive effects of drugs upon the healthy human organism up to the year 1877; "A Cyclopædia of Drug Pathogenesy" is a compilation of the physiological effects of drugs upon the healthy human organism and the results of experiments on the lower animals, supplementing Allen's Encyclopædia; Hering's "Guiding Symptoms" contains principally cured symptoms, and as Hering remarks, "Is a complement to all other materia medicas;" if to these we shall now add, soon as they be recorded, the symptoms that the Institute of Drug Proving of the American Institute shall evolve in their wonderful work now in progress, we shall have a very complete enumeration of all the symptoms thus far observed as at all connected with Aconite. But the work need not end here, and every authority in existence can be similarly treated, and the result will be only more convincing.

In each of these investigations the author's symptoms are each and all analyzed separately in this fascinating manner, the results compared, and finally the deductions we must make will be surprisingly the same in all cases by whomever made. Any tyro can do all this and never fear contradiction. In other words, the result must be a scientifically accurate compilation of the cough symptoms

that can be produced and cured by Aconite. Furthermore, it need not be a great surprise to find that the great Hahnemann, in his Materia Medica Pura, anticipated the greatest part of all we now know.

The next step recommended in a complete study will also be mechanical, and if gone through with several times will unfailingly convince that the many materia medicas are not so much at variance with each other, but each gives expression to what its author considers more important. The many materia medicas, therefore, are only so many opinions, none of which can contradict the scientifically accurate facts evolved by our first operation. Time forbids the elaboration of this step in this paper.

The last step to complete this very interesting and comprehensive way of studying our homœopathic materia medica consists in comparing of the Aconite cough, for instance, with other coughs, and repeating without stint. This process shall be the burden of this paper.

The conclusions arrived at by any one, and every one pursuing this method of study, must be, that—

1. The character of the cough that Aconite is most apt to cure is—

Dry, short, severe, hoarse, loud or croupy.

2. The exciting cause and its location is most apt to be—

Larynx—Burning or tickling.

Trachea—Burning.

Throat—Scratching.

3. The conditions accompanying and following the cough are most apt to be—

Larynx—Pain.

Chest—Stitches or soreness.

Expectoration—Bloody occasionally.

4. Aggravations, ameliorations and direct results of the cough are most apt to be—

< at night.

< lying on either side.

< from change of temperature.

< from eating or drinking.

> lying on back.

This is the analytical and scientific conclusion of an investigation

into the Aconite cough, and is, we admit, as dry and unmemorizable as are repertories. Again, it is studying the Aconite cough as an abstract quantity, which is impossible in Homœopathy just as it is unhomœopathic to prescribe for individual symptoms, when we find them in patients without studying the patient's individuality. Consequently, in making comparisons, or, better, differentiations, while we deal with the abstract to begin with, we must embellish our abstract by the so-called genius or individuality of the remedies to be differentiated.

With reference to Aconite, we must bear in mind that it is a short-acting remedy, and, therefore, is not called for by chronic coughs. We must remember that such coughs come on suddenly and in plethoric individuals; weakly individuals come down more slowly and recover more slowly than the Aconite patient. The symptoms of Aconite, partly because of their severity, are very generally accompanied by a nervousness amounting to fear, even of death, and a great restlessness. The pains, whether in throat, larynx or chest, are severe; great soreness, even burning and stitches. Then we must also bear in mind the numbness and tingling pains peculiar to Aconite. And not forget the fever and great thirst. Indeed, this only faintly describes the individuality of Aconite, and the more thoroughly we know the entire action of Aconite the less likely we shall be to make errors in differentiating it from all other remedies.

There is no reason why we should not be able to differentiate the Aconite cough from every other cough in our materia medica. Such a task must be undertaken if we would make a complete study of the Aconite cough. We are, however, studying the Aconite cough merely in order to illustrate a method of studying our materia medica, and precisely as it is advisable, on account of the encyclopædic nature of the subject, to study the polychrests first until familiar with them, then the semi-polychrests, then a less frequently used division, etc., so following the lead of the great Bœnninghausen, the greatest of classifiers, it is advisable to limit our work by using only the highest grade of remedies—the capitalized—in some good repertory. We have selected Dr. Kent's late and excellent Repertory to illustrate our claims. Thus, for comparison with Aconite, for dry cough, we have Alum., Ars., Bry., Hyos., Ign., Lach., Nux v., Petr., Phos., Rumex., and Spong.

Alumina: Has a dry cough. Extreme dryness and lack of

secretion characterizes the action of this remedy throughout, but the cough is a chronic one.

Arsenicum: Symptoms, in the abstract, remind one in many respects strongly of Acon. It has very great restlessness and anxiety, even fear of death; the intense thirst, burning and heat, aggravation at night, etc., also a dry cough. But unlike the Acon. restlessness that comes in the early stages of an acute inflammatory fever, the Ars. restlessness comes in the latter stages after the patient has become greatly reduced, or in low typhoidal fevers; the anxiety and fear of death is rather because the patient feels it is useless to take medicine; the thirst is unquenchable, wants only a little water at a time, and that often not retained; the aggravation comes after midnight, while Acon. has its aggravation in the evening and early night, etc., etc. The two remedies need never be confused. The dry cough of Ars. is apt to be an extension of the catarrhal state from the nose downward into an asthmatic dyspnœa, with a dry, hacking, altogether different from the Acon. dry cough.

Bryonia: Also has many symptoms in common with Acon., and it is just this very great resemblance of symptoms in the abstract that disheartens the student, but the differences are distinct, and when the individuality of the remedy in the concrete is once recognized the distinctions become quite clear. We must bear in mind that stitching, tearing pains, and that an aggravation of all symptoms by motion, are characteristic expressions of Bry., and that its cough hurts the head and chest every time he coughs,—this cough comes quickly after "taking a cold," but not so abruptly early as is the case in the Acon. cough.

Hyoscyamus: Has a dry, nervous, spasmodic cough, worse when lying down and better sitting up, while the Acon. cough is better lying on back but worse lying on either side. The Hyos. cough is worse eating, drinking, talking or singing, and the Acon. cough is also worse eating and drinking. It is peculiarly effective in old people, in nervous temperaments, and when caused by an elongated uvula.

Ignatia: Dry, short, nervous cough; but Ign. has running through its symptomatology, a peculiar contradiction of symptoms, that is noticeable also in its cough; the more the patient coughs the more he wants to cough, instead of getting relief.

Lachesis: Has a dry cough, worse after sleep, which is the chief

characteristic of this remedy, and it is peculiarly aggravated by touching or pressing the throat.

Nux vomica is useful in dry, short, hacking cough with headache, and soreness in the region of the stomach, and unlike Acon. is apt to be worse after midnight or very early in the morning. The comparison of this remedy with Acon., and, indeed, the comparison of any two other remedies, could occupy the whole period allowed for the reading of a paper, and it should always be interesting. Furthermore, it should also be more instructive and interesting than the study of either remedy without comparisons, because two of the fundamental principles of study would thereby be satisfied. On the other hand, it could be less instructive, because the first principle of study, viz., comprehension, be ignored almost entirely or quite so. Query: How many students, particularly beginners, can learn the materia medica by applying themselves to such otherwise valuable works of reference as even Gross' Comparative Materia Medica? This being our theme, we may be pardoned for again reverting to it. Comprehend, compare, repeat. Comprehension can never be complete on account of the voluminosity of the material; comparisons may become odious; repetition may be tiresome prattle. Our object being to learn the materia medica, we can fortunately come more or less near comprehending the apparent individuality of the remedies; comparing their most glaring resemblances and differences, and repeating within reason, brought about by using only one symptom of one and the same remedy as the guide for one study. In our illustration all comparisons are made with the cough of Acon. The peculiarities of the Nux temperament, fiery, excitable, thin, irritable choleric persons with dark hair, persons who lead a sedentary life or make great mental exertion, gormandizers, even debauchers—conditions that are apt to exist when Nux symptoms are indicated—must be distinguished from the plethoric Acon. temperament with rigid fibre, even though possessing also dark hair and leading a sedentary life. Nux is more apt to relieve symptoms that follow stomach abuses; Acon., complaints caused by exposure, and especially when bearing any of its leading features such as anxiety and nervous restlessness.

Petroleum: Also has a dry cough most prominently, according to Kent. Like in Acon., it is apt to be worse at night, and particularly effective in children. Acon., however, is particularly suitable

also to old persons. There is considerable resemblance of these two remedies in the respiratory symptoms when their pathogeneses are examined, but the genius of Acon. is very apt to be noticeably absent or present. It has been observed that the Petr. cough may be accompanied by a melancholy mood, feeling as though there were but little time left to make a will; the fear of death of Acon. is more apt to be with more anxiety and restlessness. It may be well to remember the adaptability of Petr. to persons with light hair and skin, Acon. to dark hair and skin; Petr.'s special preference for the skin in its field of action, with aggravation in the winter time, and its adaptability to long-lasting diseases might also be of help in differentiating this remedy, of which Allen says: "The action is very complex and not easily defined."

Phosphorus: Cough is dry at first, though with expectoration later. It rarely has a fever, and, therefore, is not so apt to be indicated in acute diseases. It arises from an irritation or tickling down in the trachea. The cough is worse from a change to cold air, from lying on the left side particularly, also worse lying on back, and Acon. is worse lying on either side, but better lying on back. The individuality of Phos. also impresses itself upon its cough, so that in phthisis the patients are by preference tall and thin. There is great oppression on chest, and there is often a tendency to easy hæmorrhage from the lungs, etc., etc.

Rumex: Has a dry cough, fatiguing and incessant, caused by tickling in the supra-sternal fossa, extending down the larynx and trachea, all very much like in Acon., but with Acon. there is more fever, etc., indicating inflammation, while in Rumex, there is simply an excessive morbid irritability, yet not passing into inflammation. The Rumex. cough is particularly aggravated by cold air, so that the patient will cover up the head in bed in order to stop coughing. The Acon. cough is apt to be caused by exposure to a cold dry wind, but is not so apt to come on until the patient is warm in bed and has had several hours' of sleep, and its cough is not particularly relieved by covering the head, as is the case with the Rumex.

Spongia: Is almost synonymous with croup, but our knowledge of this remedy should not stop there. It is just here that another great advantage of this method of studying our materia medica suggests itself, viz., that it gives a blow to the prevalent empirical way of prescribing our homœopathic remedies, and the less we yield to

empirical methods, the less we will have of combination tablets, and the seductive recommendations that emanate from the laboratories of the many manufacturing pharmacies, and the better versed we shall become in the true art of healing. Spong. is also indicated for a dry cough that is not croupy, though not often thought of, and Dr. Kent claims it to be thus most prominently indicated. Extreme dryness of the mucous membranes has been called a key-note of Spong. The dry cough of this remedy is often indicative of heart disease, phthisis, whooping cough, etc. Like Acon. it has the anxiety, fear, fear of death, etc., but with much less febrile excitement. The symptom develops slowly, in Acon. abruptly, at least more quickly. The Spong. cough is worse in hot room, but better by eating or drinking, again distinguishing it from Acon., whose cough is worse in the open air, and cold air, and worse after eating or drinking. Spong. is adapted to children and women particularly, Acon. to children and old age.

So much for the remedies having the very dry cough preeminently. The list represents only a fraction of the formidable array of all the remedies having this very common symptom. All the others can be differentiated from Acon. just as easily, and the study made exhaustive, but for the patience of those who must listen. It has been sufficient, however, to demonstrate even now that this is a superior method of studying and learning our materia medica. As we proceed with the study we are learning much more than the mere cough of Acon. The individuality of the many remedies obtrude themselves into the scheme, and by the time we have exhausted this symptom entirely, and several more similarly, we know to remember, and are able to apply our knowledge to the treatment of the sick.

The remedies that Dr. Kent capitalizes for short cough are: Acon., Coff., Sep., and Stann.

Coffea: Has a short, nervous cough. This remedy resembles Acon. very much in many other respects, and its differentiation may be difficult. It has extreme sensitiveness, intolerance of pain, great nervousness and anxiety, like Acon., but with gaiety rather than depression, pleasant dreams rather than the anxious dreams, and the fear of death is wanting. Its wakefulness, on account of mental activity, is apt to obtrude itself, and together with the extreme acuteness of all the senses, generally differentiation ensues.

Sepia: Short, dry cough, as if proceeding from the stomach, perhaps with pain in stomach, or it may be nausea or faintness and bitter vomiting. The "goneness" in the stomach is a common symptom of Sep., especially in women's diseases, the special field for its clinical use, quite different from Acon.

Stannum: Although this remedy is most popular for a profuse mucous or muco-purulent expectoration with sweetish taste, it seems also specially indicated for a short, dry, shattering cough, which, like in Acon., comes on in evening till midnight. It may have, like Acon. and Bry., sharp cutting stitches in chest, but just as Sep. has "goneness" at stomach, so Stann. is very apt to present its leading characteristic symptom, viz., a great weakness of chest.

Now the hoarse coughs must be differentiated, and our repertory capitalizes Acon., All. c., Bell., Hep., and Stann.

Allium cepa: The hoarse cough of this remedy is like the hoarse cough of Acon., but the preceding and accompanying coryza—acrid from nose and bland from eyes—will generally help to differentiate it. In Acon. the child, without any premonition probably, wakes before midnight with a hoarse, barking cough and clutches the larynx; but in All. c. the cough is more apt to be a gradual extension of the coryza into the larynx, and the child clutches the throat because of severe pain, as though the cough might tear it.

Belladonna: Is a great remedy for hoarseness generally, always with a soreness and burning dryness in the larynx, and so it is a remedy for hoarse cough, especially when provoked by the burning dryness that is a characteristic indication for the remedy, running like a red thread all through it. Like in Acon., only more so, the symptoms come on very abruptly, but they also terminate so. The peculiar heat, redness, throbbing and burning will help to differentiate it easily from Acon. There is more redness of skin, mouth and throat, and more general throbbing and burning than with Acon. The head suffers more in Bell., the chest and heart in Acon. Bell. fears imaginary things with delirium, Acon. fears death without much delirium. Bell. has no thirst with fever, Acon. has much, etc. These remedies are easily differentiated generally.

Hepar Sulphur: The dry hoarse cough of this remedy is differentiated from the similar Acon. cough, as is the case in differentiating generally by the distinction of their individuality mainly. Instead of the nervous fear of death of Acon., Hep. is characterized

by an over-sensitiveness of mind and body, sensitive, even sore, to the slightest touch, "takes cold" easily from the slightest exposure or draught, even the uncovering of hand or foot; sensitive to noises and odors, and mentally very irritable for the slightest reason.

Stannum: Has the hoarse cough prominently as well as the dry cough for which it has already been considered. We must bear in mind the characteristic weakness and emptiness of the chest.

The character of the Acon. cough is also apt to be croupy, and Kent considers this a symptom of prime importance with Acon., Hep., Iod., Lach., Phos., Samb., Spong., and Stram. But Kent's opinion in this matter need not be accepted, any authority may be adopted for study. We have preferred Kent's Repertory because we think it a good one, because of its recent compilation, and because we like its arrangement very much. As said before, though, the author has nothing to do with the scientific fact. Furthermore all our authors seem to differ, a fact, perhaps, the greatest, that has been prejudicial to the claims of Homœopathy to the rights of a science. But on studying the materia medica in this way, we learn also why and wherein they differ, and realize why the desire to reprove overtakes us, as though to settle once for all the apparent discrepancies. Too much reproving can probably never be done, but to make valuable additions to our materia medica, the fine distinctions should be more accurately defined, so that all authors thereafter *must* understand that by croupy cough, for instance, we do not mean a hoarse, or barking, or loud, or explosive, etc., cough. That a hoarse cough does not imply necessarily that it is dry, etc. ,etc. In other words, the work of reproving must not only consist in the application of the modern instruments of precision and laboratory investigations, but we believe we are justified in the claim that almost the greatest work of all yet to be done in our work of revision must consist in defining the hair-splitting differences between the meaning of symptoms precisely as any other definition in science must be scientifically accurate, and preclude any possible ambiguity or obscurity. Recall your first pages of arithmetic, geometry, chemistry, geology, or botany. Even so-called synonyms are not absolutely identical, and the important work here referred to implies the enlistment of an army of students on Coleridge, Horne, Tooke, Shakespeare, Trench, etc., but once accomplished our materia medica authors will no longer appear to disagree so decidedly. Their disagreements

then will consist only in their interpretation of the facts and their causes. Let us do more work with the material already so voluminously accumulated, at the same time that we keep busy in reproving.

The Acon. croupy cough is a dry, hoarse, severe, barking cough that comes on suddenly after exposure to dry cold winds, generally early in the night; more apt to come in plethoric and strong children; should have the characteristic restlessness and anxiety, may have even fear of death, and the old saw bears repetition that the more distinctly the individuality or genius of Acon. appears in the case the more likely the prompt cure of it. It should never be prescribed merely because it does happen to be the best first remedy in 90 per cent. of all cases of croup.

Hepar Sulphur: The croupy cough of this remedy is very much like that of Acon., and is apt to be caused by exposure to cold dry winds like Acon., but it should have some looseness about it that does not belong to Acon., and it is apt to come on in the morning, while with Acon. it is apt to appear before midnight, therefore, is often indicated after Acon. We must remember the over-sensitiveness of Hep., its irritability and aggravation from slightest exposure, even uncovering of hand or foot, while with Acon. we are apt to have anxiety, fear, and high dry fever.

Iodine: Has a hard croupy cough with difficult inspiration. Borrowing from mathematics, Iod. = Acon. — extreme restlessness and anxiety, consequently follows after Acon. has removed the anxiety and extreme restlessness. Both these remedies are most suitable in persons with dark hair and eyes, but the Acon. patient is also apt to be plethoric. It may not be amiss to remember the great emaciation so characteristic of Iod., and the ravenous hunger peculiar to it.

Lachesis: Dr. Hering's discovery also has a croupy cough prominently, and according to some authors most prominently. The cardinal indications for this remedy generally are:

1. Extreme sensitiveness of the larynx to external touch, and especially a feeling of suffocation and constriction so as not to bear anything tight around the throat.
2. The pain of the larynx is left-sided, extending into the ear.
3. Worse after sleep.
4. Better as expectoration loosens.

These peculiarities easily differentiate Lach. from Acon., which has none of them, per contra its own well defined.

Phosphorus: Dr. Kent in his Repertory names Phos. as another remedy having a croupy cough most prominently, and I can no longer refrain from some remarks I was tempted to make while considering All. c., which is ranked as a remedy of the very highest importance for dry cough by Bœnninghausen, and not named at all among the 250 remedies of Kent or Lee and Clark. So, very likely, Dr. Kent is recording his opinion based upon experience, and the clinical verification of others with reference to Phos., but he fails to give it the same prominence in his recent Materia Medica that he does in his Repertory, and this is another one of the many apparent discrepancies that tend to estrange the student from the truths of our materia medica. This is the subject, however, of the next of this series of papers, and I only wish to emphasize the fact here again that the many materia medicas and repertories are after all only so many distinct opinions,—many opinions that may be correct, too, I wish to draw your attention to,—but in this world of "many men of many minds," unless we have record of the authority for such opinions, the natural result with all but the over-credulous will be skepticism. In studying Phos. and its croupy cough, we must say that, as any other remedy in the materia medica might be indictated if the totality of symptoms warranted, unless the totality of symptoms be haply covered by Phos., it seems more generally indicated for the later stages of croup, when collapse threatens, rattling breathing, weak thready pulse. Phos. and Acon. are generally easily differentiated. The most essential features of Phos. and the rationale of the pathogenic action distinguish it. It has, as a special feature characterizing it, an adaptability to tall, slender people with fair skin, blonde or red hair; Acon., dark hair and eyes. Phos. is particularly indicated in young people who grow too rapidly, are inclined to stoop, and suffer from chlorosis and anæmia; Acon. in children who develop very high fevers easily and possess a "tonicity of fibre," and in the old. Phos. has a weakness of the whole body, Acon. has great congestion with full bounding pulse and high fever. Phos. suits the phthisical, Acon. the plethoric and strong but leading a sedentary life. Phos. low adynamic fevers with little or no thirst, Acon. synochal and inflammatory fevers with much thirst. Phos. the brain-fag, Acon. the acute fear, even of

death. Phos. disorganizes and decomposes the organic substances of the body, while the power of Acon. is wholly functional. Phos. acts upon the blood, bones, liver and kidneys pre-eminently, Acon. upon the cerebro-spinal nervous system. The enumeration of differences and on the other hand the enumeration of the many resemblances could be carried much further to "confusion confounded."

Sambucus: The study of each remedy in this way should teach a lesson, and being the education that a student gives to himself most valuable. We fail to find a single cough symptom of any kind noted under Samb. in "Materia Medica Pura," Allen's "Encyclopædia" or "Cyclopædia of Drug Pathogenesy." Hering's "Guiding Symptoms," however, notes a single croupy cough symptom, and that he ranks as of the third degree of importance; therefore, a clinical symptom more or less frequently confirmed, but not verified by cures. In Knerr's Repertory of the "Guiding Symptoms," for a reason that we admit we can not conceive, it is raised to the second rank, and now Kent ranks it in first place. Not to encroach further on the matter of our next paper, where is the thinking student who will not do very serious thinking of his own by this time? This kind of thinking, however, leads direct to orthodoxy and not to skepticism. We must not pass this remedy by, moreover, without learning something of it also. It is indicated in asthma, malaria and conditions simulating croup. The spasms of dyspnœa come on suddenly, generally at midnight; child turns blue, gasps for breath, and seems as if almost dying. Goes to sleep and wakes up with another attack repeatedly. Acon. has its croupy condition also in the early night, you will remember, but does not, like Samb., repeatedly sleep, and sleep into a repetition of the attack. The fever of Acon. is apt to be characteristic; the fever of Samb. is apt to be dry while he sleeps, but the patient is apt to sweat profusely when awake, and this latter symptom accompanies many Samb. affections.

Spongia: Now we are face to face with the most popularly known remedy for croup. We shall indulge in only a comparatively brief differentiation. Like Acon. and Hep., the Spong. croupy cough is apt to be caused by dry cold winds, but does not have the high fever and dry hot skin of Acon. The Acon. condition is apt to come abruptly, Spong. requires a day or two longer for its development. They both have anxiety, fear, even fear of death, and great restlessness, but the febrile excitement distinguishes them. The attacks

of both are most apt to come on before midnight, but in Spong. more gradually, and probably with greater difficulty in breathing, on account of the dryness of mucous membrane, which is a key-note of Spong. The inspiratory effort of Spong. is particularly worse. Spong. is apt to suit fair complexions and lax fibre, Acon. dark hair and rigid fibre. Spong. has exhaustion for the slightest reason that is absent, if not reversed, in Acon. Both are worse from warm room; but Acon. is aggravated, while Spong. is ameliorated by eating and drinking.

Stramonium: Is the last remedy having a capitalized importance with reference to the character of the Acon. cough. This remedy, we believe, has not been sufficiently thought of in croupy coughs that are violently spasmodic, as many are. Stram. is characterized by the violence of its symptoms throughout, mental and physical, as also by their convulsant and spasmodic nature. This appiles to the cough as well, and we believe would relieve some severe attacks where Acon. does not do so promptly, and before Spong. applies, when the attacks are decidedly convulsant, and, perhaps, where every cough is accompanied by a jerking up of the legs. Its wonderful immediately palliative effect in asthma, when its burning leaves are inhaled, suggests this probability also. Like Acon. it applies most particularly to young, plethoric persons, but there is the absence of the fear of death, and there is apt to be more delirium and loquacity.

Time makes it necessary that this end the illustration of our views with reference to the study of our materia medica. We have compared about twenty-five remedies with Acon. thus far, some several times. The "character" of the Acon. cough has been studied consistently to its entirety. Our next step would be to compare similarly the "exciting cause and location" of the Acon. cough, then the "conditions accompanying and following" the Acon. cough; and lastly the "aggravations and ameliorations." This would entail the similar comparison of as many more remedies and numerous repetitions. This is not a mere repertory study nor a cyclopædic undertaking, and can be pursued by any novice. By the time of its entire completion we claim that it will have given a more general and better knowledge of our homœopathic materia medica than hitherto suggested. It will satisfy the scientific stickler—God grant him long life—it will encourage the student that becomes bewildered

at the outset, and it will create a love and zeal that seems to be a present day lamentable desideratum.

BY WAY OF RECAPITULATION.

For the purpose of aiding students we have attempted to outline a method of studying our materia medica that seems to us to be more satisfactory in producing the desired result than any method that has been drawn to our attention in the past twenty years of active study of our homœopathic materia medica. What is the "desired result?" The desired result from our point of view is to be able to cure the sick by the application of a knowledge of the means to be employed. The acquisition of this knowledge is the purpose of study. This knowledge implies the comprehending, remembering and the recollecting at the proper time. The basis of the method is the symptom, the factor that made our law of similia possible. Consequently the comprehension of the symptom is paramount, and it is here our foundation for study must be laid.

This symptom is thoroughly analyzed. Then the corresponding symptom of all the provings of this remedy ever made is noted, analyzed and classified according to the best known scientific methods.

Now the selection of any symptom of any remedy is the first step to be decided upon, and the only difference between all symptoms is that some are harder to analyze than others. By way of illustration, we selected a common symptom of a remedy at random, and, therefore, a hard one, for special symptoms are more rare, and, therefore, generally much easier to analyze and compare.

From this result it is easy to deduce, with scientific accuracy, what should be expected in future provings, and what in the application of this remedy to the sick.

Knowledge becomes a science only when it is "co-ordinated, arranged and systematized." The "co-ordinating, arranging and systematizing" of our symtpoms, therefore, as we recommended in our first paper, makes or unmakes Homœopathy's claims to a science. The study of this science is only complete after "comprehending, comparing and repeating" it. The "comparing and repeating" are consistently demonstrated in this paper. The "comprehending" is the fascinatingly interesting work of a future paper. Thus, only,

can the three essential elements of study be satisfied. And best of all, we are demonstrating the whole to be practical.

This method, to our knowledge, has not been exploited in full thus far. We do not claim this to be the "onliest" method of learning. Far from it! But we do claim that where the comparing and repeating—the second and third fundamental principles of study—have been apparently omitted, they often have been freely employed unwittingly; furthermore, additional effort has likely been expended in satisfying the first and most important principle—the comprehending. This may have been done by reproving, best of all proving on self, laboratory work with the remedies, a consideration of the various theories of the many authors with reference to the general analysis, physiological and so-called pharmacodynamical action and analysis, a consideration of pathological possibilities, a devotion to clinical verifications, or etc., etc. All these we claim are methods of aiding comprehension, and very desirable of cultivation, and in a few persons with marvelous or trained memories sometimes sufficient.

Then, again, no other system of studying our materia medica, to our knowledge, tends at the same time to establish firmly and soundly in the students' minds the crying rights of Homœopathy's claim to be ranked among the sciences.

Nor do we claim that this is all of the materia medica that need be learned. Far from this also. On the contrary, the symptom fiend deserves our pity for the necessary narrowness of his vision, and our warning lest he occupy the cell next to the chess fiend. But we do hold that the symptom ignorer is also to be pitied for his bigotry, and certainly he has no claim to homœopathic fellowship. Our theme treats only of the symptomatology of our materia medica. Is it necessary to mention the orthography—the spelling and pronunciation—of our remedies? The study of the sources and their natural classification, as well as the many various groupings, their so-called physiological dosage, their various alkaloidal and other extracts and their dosage, their pharmaceutic treatment, their history and their provers—all and more are important materia medica matters to round our materia medica knowledge. Without symptomatology, however, there could be no Homœopathy.

Symptoms have been fully analyzed in works on diagnosis and pathology, and particularly in Hering's unfinished Analytical Ma-

teria Medica. And we have our valuable comparative materia medicas, and are not unmindful of the fact; indeed, it has been singularly suggestive that the most attractive parts of the various materia medicas have been the analytical and comparative features, sometimes the real cause of their popularity, and, finally, the part that has been of the very greatest help has been the reiteration of the salient points.

Up to this time our time has been consumed in studying and analyzing remedies, not symptoms, and in comparing remedies and not symptoms, save in a desultory way. On account of the complicated complex character of the remedies, this has been an Herculean labor, and accounts for the present dearth of what the generation preceding us would have been willing to concede as able prescribers. If time permitted it would be pleasant to give reasons why our predecessars were probably better prescribers. But let us be plain as possible, and honest as possible with ourselves. One *remedy*, Acon., for example, can be studied ever so faithfully and long and repeatedly, and yet each time one returns to its consideration, after having studied a meagre score of remedies similarly, and the remedy seems aggravatingly new, unless we have frequently reviewed in the interim. Now study several hundred, take a vacation to Europe, and return to the study. Ladies and gentlemen, I believe I am voicing common experience and not making an exhibition of the weakness of my own memory.

Once, again, take one hundred similar objects, no two alike, and compare them carefully, walk away, and repeat your recollection of their differences, and I ask you do you think you would have remembered more fully the various distinguishing peculiarities if you had compared these objects all with only one in particular? The comparison of all similar coughs with only the Acon. cough in particular is the strength of our claim.

So our demonstration is not a study of Aconite, nor a study of the Acon. cough in particular or of cough in general, neither a comparison of coughs merely, nor a differentiation of the Acon. cough from all other similar coughs, it is simply a method of studying the materia medica. We sincerely believe this a method par excellence of learning the so-called individuality and peculiar features of the remedies of our materia medica, the highest aim to which we have dared to aspire. These once known, the other kind of knowledge, to know where to find the rest by reference, is assured and easy.

REPORT OF THE

SECTION OF OBSTETRICS.

Occipito-Posterior Presentations, by S. G. A. Brown, M. D.
The Therapeutic Value of Homœopathic Remedies to the Obstetrician, by M. M. Fleagle, M. D.
Threatened Abortion, by G. W. Hartman, M. D.
The Management of the Third Stage of Labor, by J. E. James, Jr., M. D.

OCCIPITO-POSTERIOR PRESENTATIONS.

S. G. A. BROWN, M. D., SHIPPENSBURG.

Notwithstanding the condition "occipito-posterior presentations" has been discussed so often and so thoroughly, the fact still remains that no subject pertaining to the art of obstetrics deserves more attention from the conscientious acoucheur.

It has been asserted that from one to four per cent. of all cases present with the occiput posteriorly. Probably 1½ per cent. would be a safer estimate. The great majority of this percentage presents L. O. P. There is no obstetrician, unless of very limited experience, who has not witnessed one or more of these cases. They are more common in primiparæ than multiparæ, at least, that has been the writer's experience.

Labor is always more tardy, especially so in primiparæ, sometimes twenty-four hours elapsing before birth takes place. Labor is also more difficult because the entrance of the head in its false position into the pelvis is more difficult and because of the greater rotation which is demanded for its completion. The pains are usually irregular and imperfect. Dry labor, either from the early rupture of the membranes, or from oligohydramnios, should at once arouse our suspicion, as these are frequent accompaniments

of this form of labor. The so-called "rigid os" is *never* present if the head is properly presenting.

As the head descends the occiput or bi-parietal diameter must pass through the narrow diameter in R. O. P. positions, corresponding to the space between the right side of the sacral promontory and the right ilio-pectineal eminence, while the bi-temporal diameter of the head occupies the larger space between the pubes and the left sacro-iliac notch. The wider portion of the head being thus placed in the narrow oblique diameter of the pelvis, naturally results in increased labor pains, these in turn cause a rapid descent of the sinciput which is free in the larger diameter of the pelvis, and thus produces more or less extension, which renders the termination of labor still more difficult and remote. The prolonged labor likewise always materially increases the danger of laceration and resulting septicæmia. Fortunately nature often comes to our assistance, as it is an inevitable fact that the majority of occipito-posterior cases rotate voluntarily into occipito-anterior ones if there is not too much mechanical interference on the part of the attending accoucheur.

It is always prudent to make a diagnosis as early as possible. If the position of the presenting head can be determined before the rupture of the membranes or the engagement of the head, the part presenting can many times be corrected if found at fault. Abdominal palpation is always of value in the early stages. Palpation of the occipital suture is never reliable. It is better to find an ear if possible and its lobe will indicate the direction of the presenting head.

If an R. O. P. presentation is diagnosed the patient should be placed in the knee-chest position as soon as possible, as this has a tendency to cause the child to recede from the pelvic brim; the child being thus free and the mother remaining in this position, the fœtus will have a tendency to rotate on its axis, and by gravity bring the heavier spinal column in apposition to the anterior wall of the uterus. In fact, one authority claims that if this position be practiced daily by the pregnant woman for a week or more before confinement, occipito-posterior positions will become a rarity.

But if labor has continued too long, pressure exerted with the finger up behind the posterior ear may assist rotation in cases where

extension of the head is not extreme. However, if extension be not extreme, it is probably better to avoid too much interference provided the condition of both patients remains good. Should it be deemed necessary to produce rotation it is probably best to grasp the shoulders within the uterus and rotate, the head being easily turned as the hand is withdrawn. In R. O. P. positions introduce right hand and push posterior shoulder backwards. In L. O. P. positions use same hand but push anterior shoulder to the front, in either case rotating head with arm and with the other hand on the abdomen make counter pressure to facilitate rotation of fœtal trunk. When it is necessary to produce rotation thus, it is best to have everything in readiness, and before withdrawing hand introduce the blade of forceps, thus preventing head from rotating back to posterior position. *Flexion must be maintained while rotating.*

In regard to the application of the forceps, authorities differ. Some maintain that forceps are invariably the rule, and that laceration of the perineum always occurs despite every precaution. Unless rotation occurs voluntarily, forceps are undoubtedly always indicated. If forceps are applied while occiput is still posterior no attempt is made to apply them to the sides of the head, as the parietal bones in the pelvis make is extremely difficult. It is also difficult to make the handles of the forceps assume their natural position, *i. e.*, resting upon the floor of the perineum. After applying the forceps they should be brought well down upon the perineum before locking them, then before traction is exerted raise the handles and thus increase flexion. Some obstetricians deem it advisable to anticipate the resulting laceration of the perineum by incising it over a groove director one-half inch or more. Lacerations usually occur within the fourchette and consequently are frequently overlooked.

Nothing has been said regarding antisepsis, but it is presumed to be understood in these latter days that no conscientious accoucheur would be guilty of such gross negligence.

DISCUSSION.

Dr. T. J. Gramm: I regret very much having failed to hear the beginning of this paper, in view of the fact that I regard this as one of the important subjects for us to be familiar with in the treat-

ment of obstetric cases. I think that we can never listen to a paper of this sort without considerable profit, particularly when it reviews, as the doctor's has done, so many of the important points in such a very admirable manner. The one thought that suggests itself to my mind whenever I hear of the occipito-posterior position, or, in fact, any other abnormal position of the child in utero, is that we should not approach an obstetric case without having made an accurate diagnosis of the position before the woman comes into labor. It is unfortunately true that in this country, or among a certain number of men, until quite lately this has apparently been considered not to be possible. I was greatly impressed many years ago, when I spent much time in the country, to know that men who are caretakers of cattle are remarkably expert in determining in what position the young of some of our domestic animals lies in utero, and long before I had it impressed upon my mind that it was possible to do that in the human being I saw that fact exemplified among people having charge of cattle. Consequently when I discovered that abroad this thing of accurately determining the position in utero before the woman comes into labor was done very commonly, it was with some pleasure that I observed the fact. The occipito-posterior position and most other abnormalities of position are recognizable before the woman comes into labor, but if you accept confinement cases when the labor pains come on, or if you conform or consent to that remarkable phase of prudery which suggests that a pregnant woman must never be exposed, even for the purpose of determining what is for her welfare, an idea which has been prevalent among old nurses, but which is fortunately now dying out, of course, it stands to reason that in some instances you will come in contact with abnormal positions first when the labor pains present themselves. It is very easy to recognize the position of the fœtus by palpation and by auscultation, and, in fact, if you do not care or have not the opportunity of studying the means of diagnosis of the position in its entirety, it will be at least possible for you to determine that you have an abnormal position of some sort if you do not hear the fœtal heart sound within two inches of the umbilicus and below a line drawn through the umbilicus. If you hear the maximum intensity of the fœtal heart sound more to the right or left the probability, in fact, almost the certainty, is that you have the occipito-posterior position. A case which I examined only the other day,

and which will come to Cæsarian section within a few days, was one where I could not hear the fœtal heart sound. Finally the conformation of the abdomen was such that where the occiput should have made a projection above the symphysis pubis there was a hollow in the outline of the abdomen. Instead of the abdomen coming down in that manner to the pubis from the umbilicus there was at this point a depression. Knowing positively that I had a malposition, I found the maximum intensity of the fœtal heart sounds to one side of the median line; in fact, con-
the fœtal heart sound to one side of the median line; in fact, con-
siderably out towards the side. Then, as a matter of more careful examination, I placed the stethoscope upon a certain point below the umbilicus and made deep pressure upon the abdominal walls, I placed the stethoscope directly over the heart of the child and heard the fœtal heart sound in a way I never heard it before, that is to say, with such remarkable intensity. That woman has a contracted pelvis, and we know that malpositions are usually associated with contracted pelvis or some other abnormality in the bony structures of the patient. As a matter of fact, these cases sometimes deliver themselves with very much less difficulty than we usually expect in such cases. That remarkable occurrence, which is contrary to rule, happens when the patient is a poorly nourished woman, and when her fœtus consequently is also poorly nourished; in other words, when you have a small child. I do not know, but it might be well to formulate some sort of working rule, or rules, explaining these circumstances. If we could say that malposition will take place when there is a pronounced failure of proper relationship betwen the size of the head and the maternal pelvis, I will formulate that rule now, that sometimes malposition will take place when the child's head is so small that it has not the usual and normal amount of pressure made upon it to place it in that normal anterior position, either left or right. Consequently it is not always necessary to apply the forceps. In my charity work, which includes a considerable number of patients who are very badly nourished, I have seen a larger number than I have ever seen recorded by any other observer of occipito-posterior positions which have delivered themselves, but I think in private practice we ought never to take such a chance. In every instance we ought to diagnose the position. The doctor made use of a term which I felt like applauding. He spoke of imprudent interfer-

ence. Imprudent interference will take place when the patient has been in labor a certain number of hours, and when the physician and patient, of course, but particularly the relatives and friends who are standing around, begin to get tired out, and they feel that this woman ought to have been delivered, and pressure of all sorts is brought to bear upon the doctor to deliver the case. They count up how many hours the woman has been in labor and consequently ought to have been delivered. Of course, those people are not in a position to appreciate the evolutions which must take place, namely, the almost entire circle from posterior to anterior, which takes place because of the inclined planes of the pelvis. If the diagnosis of the position has not been made under those circumstances, and if the physician is not competent to appreciate the exact mechanical processes that are taking place, he will put on the forceps, and the consequences will be in some instances that they slip. When the forceps slip off, it is often the case that another forceps will be put on, some brutality will be used, and this sort of thing has been done in some cases I know of to such an extent that the woman has been lacerated frightfully and completely, and suffered a spell of illness lasting over three or four months. I think we may say that when the forceps are applied and the case does not yield to moderate traction there is something wrong which requires further elucidation and study before we do anything more. The longer I practice medicine the more am I convinced that obstetrics does not consist in any form of it in the application of brute force. It is a sleight of hand trick that is necessary. It is not anything that requires a traction so great, for example, that you might fall off and break the foot board back of you, as I have heard somebody describe a case. I saw this fact exemplified in a case where two physicians, who had considerable experience, had tried to deliver such a case and the forceps slipped off. Another was tried, the extraction was tried without success, and on making an internal examination, of course, the woman then having been in labor some time, I discovered the fact that this was a moderately good sized head, and that the attempts at delivery had failed because of the fact that those diameters, which I am not going over now, were approximated to the diameters of the pelvis in such a way that the child simply could not be born that way. That was all, and an immense amount of force would have been necessary to have brought the head down in its occipito-

posterior position, that is, drawn straight through the pelvis and along the pelvic curve. In that case I did what the doctor has suggested, I introduced the hand, pushed that head above the pelvic brim, which was very easily done, because with all the immense amount of force that had been applied to it the head had not engaged in the pelvis, for the simple reason that the oval of the pelvis and the oval of the head were applied to each other in such a way that one could not go through the other unless one of them was turned. In that case the woman was delivered with wonderful ease by simply introducing the hand, taking hold of the head of the child, pushing it out of the pelvis above the pelvic brim, and simply making rotation, and then my usual short forceps delivered her with an ease that was perfectly astonishing. In other words, we had then performed simply a sleight of hand trick which required practically no force whatever.

Dr. John E. James, Jr.: I should like to second the remarks Dr. Gramm has made about the early examination of obstetrical cases, especially by abdominal palpation. I think it is a routine obstetrical practice that the majority of physicians do not indulge in. I think it is to the detriment of their own reputations and of good results to be obtained in practice. The abdominal palpation and diagnosis by the physician is a comparatively simple method and one that with a little experience brings very marked results. In every case of obstetrics the position should be diagnosed by the abdominal method. Internal examination ought to be made, of course, routinely, but more for obtaining knowledge of the condition of the pelvis and soft parts in the early stage than for diagnosis of the presentation. Diagnosis should be made previously by abdominal palpation. The relative frequency of the occipito-posterior position I think ought to place that position in the class of normal presentations rather than abnormal. Statistics we know classify the posterior position as the second most frequent position. I felt quite surprised when my hospital experience developed the frequency of the occipito-posterior position and the relative infrequency of operative interference required in it, especially in the right occipito-posterior position. Of course, when manipulation fails and indicates a condition where it is required, we may introduce our forceps. I think that the mechanism of these cases is not sufficiently well understood, or, if it is understood, it is forgotten at the time. We must realize

that internal anterior rotation will not take place until the head comes down on the perineum. Persons of experience in consultation in obstetrical practice know we are frequently called out in cases where we have the occipito-posterior position and internal anterior rotation has not taken place. Dilatation is complete, the membranes gone, the head in a low position, but at the same time the head is not down on the perineum. So long as the head is not on the perineum it is futile to expect internal anterior rotation. Of course, until internal anterior rotation has taken place we will not have delivery occur. In such cases if the condition of the child and the condition of its mother warrant it we simply must wait until the pains are sufficiently strong to bring the head out upon the perineum. As soon as the most dependent portion of the presentation touches the perineal floor it will in the majority of cases rotate under the arch of the pubis, and the case will be delivered. I do not think it is exactly right to classify the posterior position in the abnormal class because the vast majority are delivered without manipulative interference.

Dr. Blackledge: If I had not heard any other paper but the one just read I would have been paid for coming to this meeting. I deem obstetrics the most important branch of medicine that the general practitioner has to deal with. I was listening to our brother's remarks concerning the application of forceps and diagnosis of position, and particularly the remarks concerning the application of forceps and brute force. It has been my privilege to have been called to assist several physicians in the last two or three years, and they were nearly all of the other school of medicine, and I think that in every one of those cases it was through neglect in diagnosing the position and the proper management of the case that the results were as they were. One case resulted in rupture of the uterus, another in loss of the fœtus, another in loss of the mother. I am happy to say none of the cases were mine, but I assisted. I think that we cannot place too strong emphasis on the fact of diagnosing and careful and scientific manipulation of the case. Physicians of our school are, as a rule, more careful than the others along that line, at least that has been my experience. Another point has been mentioned with regard to the relatives and friends of the patient hurrying the doctor. I have been called extremely slow in cases, but I have found it pays to be slow, to wait. I have known physi-

cians who would apply forceps and get most distressing results. I believe if they had waited a little while longer the results would have been good, so I think we should diagnose our cases and be very slow in applying the forceps and in applying brute force. Diagnosing and manipulating a case very often results in normal delivery.

Dr. C. S. Middleton: I cannot add anything new to what has been already stated. I am sorry I was not in time to hear the paper from beginning to end. I want to add something to the remarks Dr. Gramm made in regard to the delivery by brute force. We older men it seems to me received a great deal of our education from professors of obstetrics who, I remember distinctly, told us dreadful stories of how they had pulled and had become utterly exhausted. That is a fact, and it is a most deplorable fact to think that men of that kind should be telling such stories and teaching such practices. I believe exactly and have practiced, as Dr. Gramm has said, with gentleness and care. I remember one case in which I was called in consultation with some younger doctors who had been turned out of college long since I had, and they had had the forceps on a number of times, and had been pulling and trying to deliver. I had the forceps taken off, made an examination with my finger, and found that they had been pulling the head against the symphysis pubis as hard as they could. It is a wonder they had not broken something. I have a pair of forceps that has stood me in good stead for many years. I apply those, and with a little gentle traction in the proper direction the head will deliver in a very short while without any serious results. So much were those men impressed by that fact that one of them stopped me on the street two or three years afterward, and said: "Never shall I forget the lesson we received in the delivery of that woman. We were all pulling wrong, and all doing a great deal of harm." That is one instance of the wrong idea of what their functions were to be. Another instance, where the doctor spoke of the instrument slipping off and breaking the foot board, and so forth. A little lady whom I delivered when she was born was delivered in my absence some years ago of a small fœtus. I do not believe there was any more necessity for instruments being applied than I think we have a case here present now, but they told me about the instruments having slipped off and the doctor falling back against the door as if he would go through the door. He was a man who had been educated in obstetrics in the past ten or fifteen years.

The lady was lacerated most terribly, I think, without the slightest necessity for it. She is suffering to-day from the effects of that laceration and bad judgment.

THE THERAPEUTIC VALUE OF HOMŒOPATHIC REMEDIES TO THE OBSTETRICIAN.

M. M. FLEAGLE, M. D., HANOVER.

In the whole realm of medicine there is probably nothing which will make or mar the reputation of the general practitioner in a community more quickly than his success or failure in the management of obstetrical cases.

This being true, it behooves us to study carefully all the resources through which this desirable end may be obtained.

It is quite probable that if pregnant women knew, and would observe even the most elementary hygienic laws, there would be but little need of the watchful care and attention of the physician during the pregnant and puerperal states.

The truth of this statement is borne out by the fact that the human oganism in its normal as well as in its pathological state is not only a *laboratory* but a *receptacle* for *poisons*.

That the human race is not entirely annihilated is due to the fact that the organism possesses many resources which enables it to throw off these toxic substances into special reservoirs, as it were, and thus partially escapes the intoxications which constantly threaten life. When, however, through ignorance or neglect of hygienic laws, on the part of the patient, these poisons are not entirely eliminated, the blood and tissues of the entire system become surcharged with them, and we have the condition of *auto-intoxication*. This condition is probably responsible for the great majority of disorders incident to the pregnant and puerperal woman; at any rate, some of the most serious of *these* disorders are undoubtedly due to this cause.

What, then, shall be the guide in the treatment of these conditions?

It is not possible in the present allotment of time to present the various forms of treatment in a thorough manner, but recognizing

the growing tendency to therapeutic nihilism in this, one of the most important branches of the physician's work, we take this occasion to present one phase of treatment in these conditions, viz., "the therapeutic value of homœopathic remedies to the obstetrician."

That there should be any doubt of this is rather astonishing, especially to graduates of homœopathic colleges, but it is true that we often fail to recognize the vast treasures at our command in treating the pathological states so frequently met with by the obstetrician.

From a practical standpoint we may ask, In what conditions and from what remedies may the obstetrician expect results?

It seems to me that the answer to this question depends entirely on the physician, and his ability to recognize what is disease, and what is curable in the patient; in other words, he must know the limitations of the law of cure. Neglect to mix our prescriptions "with brains, sir," will bring failure as a natural result. For instance, who of you have not seen the vomiting of pregnancy ameliorated and cured by such remedies as Cuprum ars., Veratrum alb., Sepia, Tabacum, Colchicum, Symphoricarpus, and others, when selected according to the law of similars; but who of you have not also seen failures from these same drugs, and many others, no matter how carefully selected, when there was some unrecognized mechanical irritation, as, for example, a malposition of the womb, or an eroded cervix.

My object in calling attention to these limitations in the sphere of action of the homœopathic remedy is not to see into how small a circle the law of Similia can be placed, but to show that by close and accurate observation this circle may be so enlarged that its circumference may be commensurate with the most advanced thought and scientific discoveries not only of the present but of future years.

That the homœopathic remedy will shorten labor and render it less painful is a matter of common observation; nor is it less true that it will render the puerperal state more free from complications. As a type of a remedy useful in these conditions I will select *Caulophyllum,* or squaw root. Although it is one of the newer remedies used by homœopathic physicians, we must not forget that many years ago it was used by the Indians in almost the identcial conditions for which it is now used. They administered the drug during the last months of pregnancy, believing that it would render labor more easy, and free from complications.

When a pregnant woman is *very nervous* or *hysterical*, and suffers from *irregular, spasmodic* pains, flying here and there through the body, sometimes in the groins or in the bladder, or into the lower extremities (like Puls.), and these pains are very severe, in fact, almost unbearable, and yet there is no apparent result from them, Caulophyllum will most certainly correct these conditions, and under these same conditions, a rigid os will quickly relax, and labor pains will become more orderly.

It is a wonderful remedy in *atony* of the uterus with hæmorrhage, or when the woman is greatly exhausted, and labor pains cease. It is also very useful in *delayed involution* of the uterus, and is probably one of our best remedies for the prevention of premature labor or irregular after-pains. We thus see the strongly marked *spasmodic* tendencies of this drug and the rheumatic symptoms are also prominent. A synonym which is quite marked in nervous women and in those suffering with some form of womb or ovarian trouble is a sensation of *internal trembling*.

Caulophyllum has this symptom quite prominently, and future observation may prove it to be characteristic. The face of the Caulophyllum patient is frequently covered with "moth spots" like Sepia. In other discomforts of pregnancy I will say that Actea racemosa is one of the very best remedies for the *lumbago* of pregnant women.

If you will give Belladonna, Bryonia or Phytolacca according to their various indications, you will have but few cases of mastitis.

But some one will say, Why do you not touch upon the more serious disorders? Where does the homœopathic remedy stand in the treatment of *puerperal eclampsia* or *puerperal septicæmia?*

I will say right here, and without fear of successful contradiction, that if the pregnant woman be placed on the homœopathic remedy for a period of at least six weeks previous of the expected labor *she will never get puerperal convulsions.*

Of course, dietetic and hygienic errors must be corrected as far as possible, but many times these measures will fail unless supported by the proper remedy. When, however, as it often happens, the physician does not see the patient until she is in convulsions, it is enough to make the stoutest heart quail, for both patient and physician are handicapped, and he is a wise man, indeed, who will recognize where dynamic drug action ends and physiological drug ac-

tion begins; for the system of the patient is overwhelmed by an irritant poison, and it must be gotten rid of just as surely and quickly as we would rid the organism of any other irritant poison.

That the homœopathic remedy does assist the organism in getting rid of the poison I do not doubt, but that is no reason why we should neglect any of the valuable adjuvants at our command, for this disease is not usually so tractable that we can afford to neglect anything that will tend to save a human life.

Cuprum arsenicosum probably stands at the head of remedies in this affection, at least, in my experience, but Stramonium, Hyoscyamus, Jaborandi and Veratrum viride ought always be thought of.

Gelsemium, Cicuta and other remedies may be indicated, but time and space prevent me from giving their indications.

In *puerperal septicæmia* the homœopathic remedy has won some of its greatest laurels. It is my firm belief that ordinary cleanliness (such as flushing out the uterine cavity and vagina with normal salt solution) combined with the internal administration of the homœopathic remedy will be all sufficient to cure the great majority of all cases. The principal remedies in this condition are: Arsenicum album, Echinacea, Carbo veg., Lachesis, Sulphur and Pyrogen. Aconite, Belladonna, Bryonia, etc., are not deep enough in their action for a truly septic state, so we only lose time by waiting for their action. There is one drug which apparently leads all others in septic states, especially puerperal sepsis, and that drug is Pyrogen.

Words fail to express the confidence with which I use this drug. Some of its symptoms as brought out in the proving are these: The patient complains of great aching in the bones as if they would break, and the patient feels as if she were bruised or pounded. With this condition there is great restlessness and anxiety of mind, and the patient must move constantly on account of a great soreness. The bed feels hard and she must move, and is generally *relieved by motion.* Then, too, there is great coldness and chilliness, usually at night, followed by very high fever, and a profuse sweat which soaks everything, nightgown, bed clothes; in fact, everything touched by the patient; but this does not relieve any of the symptoms, nor reduce the temperature. Notwithstanding this high temperature the pulse is but slightly accelerated. Now this is one of the great characteristics of Pyrogen—*lack of relationship betwen the temperature and the pulse rate.* There may be either rapid pulse rate and low

temperature or vice versa; you can readily see how closely the symptome correspond to septic conditions.

We may say then that Pyrogen has the *soreness* of Arnica, the *restlessness* of Rhus tox., the *aching* of Eupatorium, and the *mental anxiety* of Arsenic. No other single remedy has all of these characteristics combined, hence you see the value of this drug.

In conclusion, I will say that I have tried to give *types* of remedies as well as of disease. Many more remedies might have been named, and their special indications pointed out, and many ailments common to pregnant and puerperal women might have been discussed, but time forbids.

The successful obstetrician will be he who looks with unbiased mind upon the various resources at his command, and uses them intelligently. I can truthfully say, however, that when the homœopathic remedy has been carefully selected and prescribed within its limitations, I have never yet seen better results obtained from any other form of treatment.

DISCUSSION.

Dr. C. S. Middleton: I cannot help expressing my gratification at hearing this paper read. It seems to me of late years obstetrics has drifted off on new lines and is looked upon by many as a merely surgical procedure, with which I do not agree. As a member of a board of medical examiners having the branch of obstetrics in my care, it has been a notable regret to find so many of the young men who come up and pass our boards neglecting to say anything about homœopathic remedies, when the question is asked in such a way in the matter of treatment that their homœopathy should be the prominent feature. This I have expressed to them a great many times, and have been surprised to find them coming fresh from the halls of this college and paying so little regard to homœopathic remedies and treatment. I do not understand why it is so, except as I said before, that they look upon it as a surgical procedure and think that surgical means must be applied in all cases. I have told them over and over again if they would pay proper attention to that branch it would add to their efficiency wonderfully, and it detracts from it when they do not give homœopathic remedies in puerperal convulsions, etc. I am very glad to know there is one man at any rate who

has not lost sight of our art in the practice of obstetrics and can bring the remedies so clearly to our minds. With the last remedy I have had no experience, but some of the others he speaks of are most admirable. They will do their work every time if they are given according to the indications, and the patient has a right to demand them, and when they are neglected it is a deplorable fact.

Dr. Z. T. Miller: I believe that sometimes we get a lot of benefit out of the use of Pulsatilla in the 10,000 potency in a great many cases of obstetrics where the pains are ineffective, there is no obstruction particularly, but the patient is in distress. I must say that is a remedy I use very frequently in just such obstetric cases. Caulophyllum is another remedy that is useful if you can get the history of a little rheumatic diathesis. One thing I do insist upon if I am engaged for a case of obstetrics, that is, that the ptaient shall not drink tea or coffee. She must not during her gestation drink tea or coffee, because I believe from observation and experience that those things increase the sensibility of the patient, and she consquently feels her pains very much more than she would if she was not hyperstimulated by tea or coffee. Try it and see. The patient is not half so iritable or half so restless, does not complain half so much, is not half so petulant and does not want to kick everybody in the room because she has so much pain. Irritability of that kind, wakefulness and sensitiveness to pain are simply due to coffee, and for that reason I do not allow it. Chamomilla is a very good remedy for people who suffer a great deal in obstetrics. I am fortunate enough to be physician extraordinary to a midwife. That midwife delivers more women, or is with more women who deliver themselves, than any other person in our county, I think. I was called to assist that old lady out of a difficulty the other day with a woman who had had fifteen children besides this one, and I helped her out with the sixteenth. This midwife told me that that mother had been delivered or attended in her fifteen confinements by her own mother, and she had never had a slip until that time. I have practiced obstetrics in a community where my experience largely negatives all your newfangled notions about sepsis and difficult labors. Those women have babies by the dozen. One the other day had three. So that I think when we get up and tear our hair and lose sleep about obstetrics, we do it when there is really no absolute necessity for it. There are exceptions to that rule, and there are times when brute force has

to be used, and it is only the man who is physician extraordinary to a midwife that meets those cases probably, but when you come to a case of labor where the head is impacted, and that is about the time you are called to do that kind of business (they call you when nothing can be done and the child cannot be born), to say that in a condition like that you do not sometimes have to use brute force, because you could not push it back above the pelvis and do the turning, to say you do not have to sweat to get children into the world under such conditions is not according to my experience. I have had to do it, and I have never yet in 28 years lost a case of confinement. As regards the care of the patient afterward, this thing of using douches and all that, I do not resort to that unless it is absolutely necessary. If there is a condition of sepsis I might in that individual case, but I do not rush in in anticipation of those things.

Dr. T. J. Gramm: I listened to the doctor's paper with very much satisfaction. He has been most fortunate in selecting Caulophyllum as a remedy by which it is possible to demonstrate the action of a homœopathic medicine in obstetric cases. I think that the action of a remedy like Caulophyllum in about the third decimal dilution when the labor pains begin to fag offers an admirable opportunity of demonstrating that an attenuated drug will really act, and it is a God-send in these days to be able to appreciate the fact that a homœopathic medicine does act. I am aware that quinine given in certain doses will do the same thing. So also will strychnia, but there is no question about the action of Caulophyllum, and the doctor has been most happy in the selection of that remedy as illustrating the fact. When it comes, however, to the administration of drugs in conditions which are largely mechanical, or I may say in which the mechanical element plays an important part, I think that we should be very certain that we are familiar with the mechanical conditions that underlie the case. If, for example, a remedy is given in a case of delayed labor and relied upon, without determining whether there is an underlying mechanical cause interfering with the progress of the labor or with the efficiency of the labor pains, I am very sure that we will make a mistake in a certain number of cases. It is a fact that there are cases, particularly I imagine of undeveloped women, and which are characterized by absolutely no softening of the external genitalia and of the cervix. In other words, the vulva has not developed, and when the patient is lying upon the operating table and you look at her

vulva you could not say whether you were looking at a pregnant woman or not. In that sort of case you may find sometimes that the cervix will be distended and still the os is not dilated. The cervix itself is thinned out but the os is but a small orifice, sometimes admitting little more than the index finger. If in such a case you give a medicine and rely upon it you will not be doing all you can do for the case in the way of help. Under such circumstances it is an exceedingly easy thing to introduce the finger into the vagina and into the cervix. Then with two fingers you can dilate the cervix. It is remarkable the progress that will be made after that. Not being familiar with the conditions and depending on remedies which increase the labor pains, would be materially wrong if there is mechanical obstruction. That, of course, you probably remember, was the great mistake that was made in the use of ergot when it was first used. Consequently we later formulated a rule to advise our students not to give ergot until the uterus is empty.

In regard to the suggestion made by my friend, Dr. Miller, it is unquestionably true that occasionally a certain amount of force must be applied in the use of the forceps when attempting to deliver a case, but the force will never be so excessive as to have the forceps slip off and lacerate the patient and produce the tremendous exhaustion that has been described by some physicians who have said they have had difficult cases. The time when anything approaching that amount of force is justifiable is when we have not a malformation or a malapproximation of the diameters of the foetal head in the pelvis, but when there is a large head and we wish to facilitate moulding. Those are the conditions under which we may use some force, but my rule is to be on guard. If I am compelled to use anything like an unusual amount of traction in the use of the forceps I look over the position, and in the majority of cases the difficulty is revealed by the examination.

Dr. Z. T. Miller: I want to say one thing about the use of brute force. When you have to apply the forceps and mould, it is necessary to use considerable force to extract, but I have very rarely used both hands to handle the forceps. I invariably insert my hand in the vagina, and my fingers are between the blades of the forceps and the child's head and the symphysis pubis. What somebody has said here about pulling in the right direction is correct. For that reason I always calculate the axis of the pelvis and the angle of my

forceps and usually deliver the patient. This is possible because if I get the forceps well back and pull directly into the pelvic cavity then I know I am not pushing against the symphysis pubis and with the force I have to use in delivering no harm is done.

THREATENED ABORTION.

G. W. HARTMAN, M. D., HARRISBURG.

The commonness of abortion and its precedent condition-threatened abortion, in this age, together with the obstetrical problems involved, constitute the claims of this subject to our consideration.

Our illustrious Hering said, "From a child stillborn we can hope nothing; but a child born alive, no matter how feeble, may become a man." May we not apply this great truth to the unborn child as an argument in favor of the sanctity of the family and of the home? Saint Augustine said: "What will be a man, is one." The old civil laws taught, in their axioms, that a child conceived is to be considered a child born. Our present day laws may be somewhat less emphatic in their language, but in this State the interruption of gestation is a felony and there exists a prescribed penalty therefor.

Undoubtedly many abortions occurring in the very early weeks of gestation are not recognized and are mistaken for a very profuse and painful menstruation, even if the time for normal menses has passed. Many more, both criminal and spontaneous, are concealed. A knowledge of some abortions is obtained while getting the patient's history and this may be true even a long time after the occurrence. All of these instances and those that come under the notice of the general practitioners and maternity hospitals indicate that the accident or crime, as the case may be, is of very frequent occurrence. So frequent indeed that the great, fearless and conscientious President of the United States has called attention to the prevalence of race suicide as a matter worthy of the consideration of the people as a nation.

I cannot attempt any lengthy discussion of this important subject, nor is there time sufficient accorded me to touch upon all, or even many, of its essential phases. Let me, therefore, in a most informal manner, outline several cases and call attention to the peculiar features of each in the hope of creating an interest in the topic.

(1) Mrs. B., an American, aged 28, blonde, height five feet three inches, weight one hundred and fifteen pounds, consulted the writer first on Feb. 3, 1903. She was then two months pregnant. She gave a history of four miscarriages. The first was premature birth, induced mechanically, in order to save the life of the mother because of a complicating eclampsia. Previous to delivery her anasarca was extreme. The life of the child was sacrificed, but the mother recovered after several weeks of severe illness. Each year subsequently for three years, she had the same kind of trouble. Each successive time the miscarriage or abortion, as the case happened to be, occurred earlier than the preceding time.

The last one previous to time, mentioned above, occurred at three and one-half months. At the time of the first examination nothing unusual was noticed until analysis of urine was made, when albumen was discovered. She placed herself under treatment and continued with the same until she was delivered of a large child at full term.

(2) Mrs. L., American, aged 27, with good family history, conceived for the fourth time in Dec., 1903. Gestations came in rapid succession and births were premature. One child—the second—was near enough to term to survive. The last preceding miscarriage occurred in the sixth month of pregnancy. When this conception occurred the patient was very anæmic, much debilitated, and in poor condition to undergo the trials of approaching motherhood. Except languor and weak feeling in the pelvis, no unuseual symptoms appeared until the third month when an annoying leucorrhœa was noted. This became transformed into a profuse watery discharge which sometimes presented blood. She threatened to abort and began to have treatment. She was faithful in observing the instructions and therefore progressed very satisfactorily until about the middle of the ninth month when the birth occurred. The babe was well developed and lived.

(3) Mrs. S., aged 35, American, the mother of two living children, consulted her physician on Aug. 5, 1905. She gave him a history of uterine bleeding for three weeks previous and desired treatment for this symptom. The discharges consisted of coagula and shreds of tissue. Previously she detected something in a clot that she described as having been enclosed in a sack similar to the lining membrane of the shell of an egg. Incomplete abortion was diagnosed and curettage advised. Operation was refused and therefore

medicine was administered. The patient lived in the suburbs of a city and reported only occasionally. It was not until forty-five days after the foetus was lost that the placental tissue came away. During this entire period the woman attended to her ordinary domestic duties.

(4) Miss T., aged 19, an American, presented herself at the office in Feb., 1903. She told symptoms simulating those of typhoid fever, and was put to bed. When examination was made, the uterus was enlarged and elongated; there were offensive sanguino-purulent discharges, tenderness upon pressure, and a temperature of 103. Diagnosis—pregnancy—atempted abortion. The diagnosis when given to the patient caused her to become very indignant and to deny even the remotest possibility of such an occurrence. Daily for five days accusation of her true condition was made and the truth as frequently stoutly denied. On the sixth day her lover appeared upon the scene and suggested that the people with whom the woman boarded supposed the attendant did not know with what disease she was suffering. He inquired whether they knew and learned that they did not. It is obvious that they were not good judges as to the accuracy of his diagnosis. The lover proceeded to confess that he was the source of her trouble and that a professional abortionist had made two attempts to destroy her product of conception. Under treatment she soon began to improve in health and in about three weeks was able to be about again without having aborted. She was able to keep her friends ignorant of her real condition and when the gestation period was almost completed she went off to Baltimore to "have a tumor removed."

These several conditions and complications have been presented with the hope that they may be more fully considered in the discussion. The first and second cases would suggest the happy outcome of conditions where prospective mothers are taught to place themselves under the attendant's care early and are willing to do so. They are, at the same time, evidences of the value of carefully selected medicines, especially homœopathic medicines, in the management of such cases.

The attendant should always be selected early, especially when the pregnant woman is a primipara, for the reason that he and not the neighbor woman nor the faithful mother even, can best direct the patient in all the ills of pregnancy.

The members of the profession who do obstetrical work, if digni-

fied, but kind, and willing to show a sincere interest in each case, can win the confidence of their female patients and then it will be easy to suggest to them to announce their pregnant condition as soon as it is suspected; and that suggestion as well as those concerning their part in the proper care of themselves will be cheerfully and carefully attended to.

The third case would illustrate how easy it is to be deceived as to a correct diagnosis when the placenta is well or fairly well attached to the wall of the uterus, and how good nature is to those who refuse operative treatment.

The fourth case will show that even when membranes are disturbed or apparently disturbed, or when infection follows septic instrumentation, the foetus may remain viable and go on to term. It is also intended to call attention to that undesirable service, viz.: Following the professional abortionist and repairing his criminal work, to which we are occasionally called. I wish that it might be otherwise; but are we not justified in refusing to treat these septic cases when called upon to do so?

References:

Lusk's Science and Art of Midwifery.

Guernsey's Obstetrics.

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THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

JOHN EDWIN JAMES, JR., M. D., PHILADELPHIA.

In presenting a subject with which every physician has had so much practical experience, it is my purpose to call attention to the importance of dealing with the stage of the after-birth with as much due regard to the normal mechanism and the natural laws operative as is given in this stage of fœtal expulsion, and thus make a plea for the expectant management, in contra-distinction to the active manipulative handling that to-day is too extensively in practice. There is a tendency on the part of too many physicians to grasp at means that will shorten the number of hours their cases are in labor, presumably to conserve the strength of the patients, actually to allow them to finish with the tedious job and return to numerous other pro-

fessional obligations. The expulsive stage suffers far too severely by unjustifiable interference to a much less degree, however, than the succeeding stage, when you consider the almost total disregard accorded its management. When the child is born there remains for the atendant merely the "simple" act of "getting rid" of placenta and membranes, and this is effected in the quickest, most convenient, and, therefore, naturally, the most careless manner. From my own experience I feel that too great a stress cannot be placed upon the proper scientific management of the third stage. It is an absolute certainty that the proper management of this stage is, for the puerperium, just as important, if not more important, than that of the birth itself.

For a thorough understanding of the mechanism of this period of labor it is essential to become somewhat elementary, and review briefly the formation, structure and mode of attachment of the normal placenta. As the fundamental principle, then, we begin with the all-important transformation of the endometrium into the decidua of pregnancy. There is the presence of an irritant derived from the ovaries, and, probably, through the circulatory system, conveyed to the uterine mucosa, to induce a hyperæmia, and constantly increasing the normal thickness of this mucous membrane of 1-3 m.m. to 1 c. m. in many cases. Of greatest importance is the differentiation which accompanies this enlargement of the mucosa into two histologically distinct strata; a lower stratum joining the musculature to which the glands are limited, the glands hypertrophied and separated by but delicate strands of connective tissue (portions of the normal inter-glandular substance), and hence the name given to it, "spongiosa," and an upper or outer stratum composed entirely of the large decidual cells termed the "compacta," through which may be seen here and there a narrow crypt leading to the glands beneath it. Within this latter layer will also be found capillaries of the normal endometrium, markedly dilated.

The already fertilized ovum enters the uterine cavity, and by virtue of the eroding function of its trophoblastic covering, imbeds itself directly into the decidua awaiting it, so that it comes to lie beneath the epithelial covering of the decidua. As a rule, this is at a point above the middle line of the uterine cavity, it may be in the fundus, or, as is more frequently the case, on the walls, anterior or posterior. The point of nidation becomes the site of placental at-

tachment, for with the imbedding of the ovum the villi of the chorion are formed and we have their growth towards and directly into the capillaries, again by the eroding action of the trophoblastic elements covering them. Numerous capillaries will eventually anastomose, forming the large uterine sinuses. To hasten through this interesting part of the placental formation we need but mention the chorion læve and chorion frondosum as the next steps, and notice the marked proliferation of the primary villi giving rise to the countless secondary branches.

At the end of the third month we find the placenta proper fully formed and able to carry on its functions, histologically composed of the villi filling up the uterine sinuses, and thus floating loosely in the maternal blood streams, the bulk of placental tissue being limited on the fœtal surface by the chorion, and on the maternal by the decidua. At this period the villi are not firmly unitel to the decidua or sinuses. We have all seen cases of abortion at the third to fourth month, where the villi have been simply pulled out of the decidual sinuses intact. After the fourth month begins intimate union, however, by means of infarcts, which bind the villi to the decidua, and, indeed, to the compact layer of the decidua. At term, naturally, this attachment is the firmest, and at this time it is utterly impossible to pull the villi out of the sinuses or even to loosen the placenta from the decidua compacta. How, then, does separation take place? Ordinarily the separation of the placenta begins during the birth of the child. As soon as the greatest part of the child leaves the uterine cavity—thus, comes to lie in the lower portion of the parturient canal—contraction of the upper uterine segment takes place. There is a marked diminution in the size of this segment. However, the placenta can follow such a decrease only to a limited degree. Therefore, the weakest part of the attachment gives way, and hence there occurs a tearing of the delicate inter-glandular strands of tissue of the decidua spongiosa, the compact layer of the serotina being thrown off as portion of the placenta. Thus you can readily appreciate of what importance it is in this normal placental loosening to have a perfectly formed decidua, and, as will be referred to later, the results of malformation in this structure.

Another point is of value to keep in mind. The placenta does not in its entirety separate at one and the same moment. The process is a comparatively slow one. When the after-birth is unable to follow

the diminution in the size of the uterine body, it begins to pucker or becomes folded, and when the child is completely expelled, with the decrease in the intra-uterine pressure attendant upon this act, some part near the center of the placental bulk, as a rule, gives way or loosens and into this so formed "free space" the maternal sinuses will bleed—producing the "retro-placental hematoma." From this point separation continues gradually, associated with enlargement of this blood clot, until the entire mass is free of uterine attachment, when it is inverted, as a rule, and falls into the lower birth canal, producing separation of the membranes by virtue of the traction by its weight, the fœtal surface thus frequently presenting. This method of Schultze is not invariable, a certain proportion of cases being met with where the placenta presents with its free edge or maternal surface, the retro-placental clot being absent.

At this point begins the management, and the question at once arises. How long ought we to await the expulsion of the placenta? According to the teachings of the best clinicians here and abroad, we answer:

1. Until we are sure that the placenta is separated.

2. Until we give the patient an opportunity to expel the placenta by the natural forces.

There are several means at our disposal to determine the separation.

a. With the birth of the fœtus, and *before* the separation of the placenta, the fundus uteri will be three to four fingers breadth below the umbilicus.

With the separation and the formation of the retro-placental blood clot, associated with more or less muscular relaxation, the fundus rises to the umbilicus and above this point, the distance varying in cases.

b. Associated with the elevation of the fundus there is an elongation of that portion of the umbilical cord protruding from the vulva. For demonstration purposes, a sterilized safety pin placed through the cord immediately in contact with the vulva and as soon as delivery of the child has taken place will be found 3-6 c. m. removed from the vulva, when the placenta has separated and fallen into the lower uterine segment.

c. The absence of a certain fluctuation or pulsation wave in the cord, elicited by holding the cord in one hand, and with the other

gently massage or press upon the fundus uteri. This sign obtains only so long as the placenta remains attached to the uterus, for then, inasmuch as the umbilical vein remains filled with blood, the external manipulations will be transmitted through the cord. When separation is complete, transmission is impossible. This sign has been but recently brought out by Strassman, of Berlin, and I have been able to verify it. It fails only when, exceptionally, valves are present in the umbilical vein.

With separation accomplished, what length of time are we justified as designating sufficient to await spontaneous expulsion? I will not be dogmatic as to minutes or hours. The safest rule is to wait until the patient has recuperated sufficiently from the second stage of labor to be able to assist the usually insufficient uterine contractions in expelling the after-birth. In a normal, uncomplicated case, until we have absolutely proven that the woman cannot empty the uterus of placenta and secundines, all interference on the part of the accoucheur is unjustifiable. On the other hand, it is folly, when the placenta is completely separated, and involuntary efforts are insufficient, not to interfere. The majority of authorities are agreed that a half hour is an average period to await spontaneous expulsion. F. Ahlfeld in his text-book of Obstetrics, published in 1898, adhered tenaciously to non-interference in the third stage, advising waiting hours, or even days, if need be, for the placenta to be expelled spontaneously. Since this publication, it is interesting to note the results of his investigations of this subject publshed in the "Zeitschrift fur geburts. u. gynak. Bd. LVII, Hft. 1. His statistics at this time showed that in 406 consecutive births in the Marburger klinik, in 6.5 per cent. of the cases, the abdominal forces were unable to expel the placenta, and these were obtained only by the Crede method, 1½ to 2 hours post-partum; in 3.75 per cent., there was spontaneous expulsion; in 19.25 per cent., the abdominal forces and external pressure were sufficient to bring about expulsion. Statistics of most clinics agree with these figures, proving spontaneous expulsion as occurring in the minority of cases, and that the voluntary effort of the woman prevailed in the majority of cases. Likewise, the statistics of Schauta show that in 100 cases after the first half hour post-partum the placenta was found in the lower birth canal ninety-nine times. Thus we see we have in the majority of cases of labor to deal with the simple retention of the

placenta, a condition that is too frequently confounded with adherent placenta. Uterine contractions in these cases are present, as easily demonstrated, but the contractile activity of the upper segment is not of such a degree to be able to empty the passive lower segment of its contents. Cases where we have an enormous retroplacental hematoma will have the cavum uteri so over-stretched as to incite pains of sufficient intensity to deliver the placenta. The contractions of the abdominal walls, aided, when these are relaxed by the pressure of the hand on the fundus of the uterus, will bring about the expulsion in most cases. By the latter means we are not making use of the Crede expression.

Premature attempts to incite uterine contractions are to be heartily condemned. These consist in grasping the fundus,—massaging, administration of ergot,—as soon as the child is born, in order to hasten the third stage. It is these interferences too early made use of that bring about complications in the puerperium. Such manipulations are the sources of the so-called "hour-glass contractions" of the uterus, in many of the instances. If they are successful in expelling the contents of the uterus, time has not been given for the proper development of thrombi in the sinuses, and then comes postpartum hæmorrhage to menace the life of the woman or to actually result in death. Late formation of thrombi leaves easy channels for infection and all its concomitants. These manipulations tend to predispose after the uterus is empty to a tetanic condition of this organ similar to the conditions seen where ergot is administered at the completion of the third stage as a routine and without indication. This tetany predisposes to the lack of thrombus formation, and although severe hæmorrhage does not occur, nevertheless the sinuses are not completely closed and the lochia will remain sanguineous, possibly profuse, during the greater part, if not the entire puerperal period. To avoid artificial separation and expulsion of the placenta and attending dangers, be patient, and give the woman in labor and nature a chance. Wait until you know positively the after-birth is free and the woman cannot expel it. Better lose valuable time than to fly to the Crede method, or, worst of all, to attempt manual separation. Failure of both voluntary and involuntary efforts justifies the Crede expression. If this method fails to bring about delivery the indication is for complete narcosis and a

second attempt by Crede's method. Failure under this condition indicates that the placenta must be extracted manually, the extreme resort.

The question of the loss of blood to the woman while adhering to the expective management, merits attention. Excluding hæmorrhage sufficiently severe to warrant the immediate emptying of the uterus, we have that condition frequently present, where the placenta being situated laterally, the lower rim is but loosely attached, and this attachment giving away under the weight of the retro-placental bleeding, allows the blood to flow continuously until the placenta is delivered. The bleeding is naturally more severe than in cases where we have to deal with a retro-placental blood clot. The absence of the hematoma favors increased bleeding and less excitability to uterine contractions. Ahlfeld has tabulated the result of his investigations in this point. Out of three thousand births, normal and abnormal, the statistics were as follows:

Length of 3d stage.	*Number of births.*	*Amt. of blood lost.*
0-5 minutes.	49	441 grammes.
6-14 "	40	637 "
15-29 "	158	759 "
30-44 "	186	836 "
45-60 "	215	775 "
61-90 "	1674	402 "
92-120 " and over.	712	327 "

In other words, the shorter the third stage, the more blood lost, the longer the marked comparative decrease in amount lost. The bleeding of the average case, therefore, is not an indication for shortening this stage. Of course, there are many conditions, which, when present, will demand the almost immediate emptying of the uterus of placenta and membranes by any means. A notable instance being an active tubercular lesion of the mother. I am referring to the normal uncomplicated case. The above table is interesting in showing that in the vast majority of cases the length of the third stage was 1 to 1½ hours.

G. F. Blacker, in the Lancet, April 16, 1906, states that the tendency to shorten the third stage to much shorter than thirty minutes is attended with considerable risk to the mother. He likewise says

there is no harm in waiting a half to two hours for spontaneous expulsion and thus avoid manual interference.

While I believe most thoroughly in the expective method, I can readily appreciate that it may be carried too far. Strassman reports a case where the placenta was awaited twenty-four hours. Manual separation was then performed, and the woman died of an embolus. Too long waiting allows increase in the number of thrombi, narrowing of the canal, time for beginning putrefaction, all making operative interference more hazardous and difficult. Watch the case, recognize the signs and indications present, and you will then know when not to interfere or when interference is called for.

Before going further I wish to but mention the following elementary but vitally important point:

1. Never make traction on the cord to hasten separation.

2. Do not twist the membranes to facilitate their separation. We believe the best plan to insure their complete removal is to support the bulk of the placenta as it is delivered, and then by backward pressure on the fundus, reduce the anteflexion that tends to occur, and so make the uterine cavity as straight as possible. If the membranes fail to separate, gentle massage will facilitate their loosening and expulsion. Traction on them should never be practiced.

3. Always make a thorough examination of the placenta and membranes to ascertain whether complete or not. Especially carefully should the maternal surface be examined. This surface should always be perfectly smooth, and with the removal of the blood clots, present a dull grayish appearance, the membrane covering this surface being the compacta of the decidua serotina.

Deviations from the physiologic process of this stage of labor do occur, and the comparative frequency of certain forms demands consideration. Perhaps the most serious is that constituting the "placenta accreta," although in its true form, met with infrequently, and according to Schauta's experience, decidedly less often since the Crede expression immediately upon the completion of the second stage was discontinued by him. Its etiology and pathology must be excluded from this paper, except to mention its occurrence in cases of myoma of the uterus. I recall a case in the maternity department of Hahnemann Hospital last spring where the placenta failed to separate totally, demanding manual separation, during which an intra-mural fibroid, size of an orange, was diagnosed. Immediately

over this tumor, the placenta remained firmly adherent. A large proportion of the cases of adherence reported have been associated with uterine fibroids.

In diagnosing this pathologic state—we differentiate. (a) Total adherence (true accreta). (b.) Partial adherence. In the total or true adherence, we have

1.—Absolutely no hemorrhage from the placental site.

2.—No alteration, as a rule, in height of the fundus uteri—at least not of sufficient degree to be confused with the elevation associated with placental separation.

3.—No elongation of cord, protruding from vulva.

4.—No degenerative changes—hence no offensiveness despite the fact that the placenta may remain in the uterus for days. Membranes may separate, however, and give rise to an offensive lochia.

5.—Strassman's fluctuation sign in cord, present.

The therapy consists in artificial separation and removal. In some cases, Crede expression may avail and it should always be given a most thorough trial before abandoned. As a rule, intra-uterine manipulations are demanded. The strictest asepsis and antisepsis must be observed in this operation. It is well to cut away that part of the cord protruding, for fear of its being carried upward into the parturient canal, and infect the case. The fingers should separate the placenta by being passed between membranes and placenta on the one hand, and the uterine wall on the other, breaking through, then, the spongy layer of the decidua serotina, allowing the compact layer to come away with the placenta. This insures a smooth surface when the placenta is removed. The operation may be difficult on account of an absent or poorly developed spongiosa, the condition that causes the adherence. In some instances, the dull curette must be substituted for the fingers. Where the spongiosa is entirely lacking, removal of the placenta can be completed only by bringing away portions of the uterine musculature, a dangerous process—threatening uterine rupture—and demanding cessation, in some cases, from further attempts at removal. This possibility should be borne in mind. Severe hæmorrhage may demand cessation of operative interference in difficult cases—demanding tight tamponing of the cavity with iodoform gauze, and succeeding attempts at complete removal of placenta tissue continued in various sittings, if the condition of the patient permits. It is in this class of cases that death from post-partum

hæmorrhage is held unavoidable. In the lighter form of true adherence, manual separation succeeds readily and hemorrhage can be avoided.

In "partial adherence" we have to deal with hæmorrhage. Massage and Crede expression may expel the major portion of the placenta; a portion remains attached to the uterus, however, and in preventing it from becoming firmly contracted, causes bleeding. This condition demands prompt treatment. Time should always be taken for disinfection of the hand introduced into the uterine cavity. The adherent tissue should be digitally separated. This accomplished, the uterus contracts and hæmorrhage is controlled. Here, too, the curette may be used where the fingers are unsucessful.

Incompleteness of operative interference for any of the forms of adherence, means trouble. If bits of placenta tissue are overlooked, later, we have to deal with subinvolution, endometritis, the placental polyps and possible malignancy. It cannot be too forcibly urged—always explore the cavum uteri digitally and see that the entire surface is smooth, before declaring the operation at an end, also, after the uterine cavity has been entered with the hand, or instrument always give an intra-uterine irrigation.

Again, the membranes may be retained completely or partially, a condition at once diagnosed upon inspection of the expelled mass. In the former case, gentle persistent massage of the uterus may be all sufficient to obtain the secundines. Frequently, a portion will be found protruding from the os which can be grasped by the fingers or forceps and gentle traction made, aided by the massage. These methods failing the indication is present to enter the uterus and remove them. Strassman recommends the administration of Secale, vaginal douches and waiting for spontaneous expulsion. The latter may take place in a certain proportion of cases—still so long as the bulk of the membranes are in the uterus, there is danger of hæmorrhage sapremia and septicæmia; possibilities we must always avoid. If, on the other hand, only a small portion be retained, we are justified in waiting spontaneous expulsion—interfering alone when alterations in the lochia demand. If any doubt exists as to a portion being retained, never make an intra-uterine examination—await developments and watch the case for indications for a digital exploration. In some cases we can say absolutely a part of the chorion failed to come away. This does not demand intra-uterine manipulations. Ex-

periments have shown that if the ripe chorion be placed in a flask of water and held at about 37°c. in about 14 days it will be broken down into small flakes. In such cases, then, the chorion will disintegrate without local pathologic changes and be discharged in an increased lochia secretion.

Complete retention of placenta and secundines may take place by means of a spastic contraction in the uterus below the placental bulk at a point corresponding to Bandl's ring. This condition is comparatively rare. It is caused by irritation of the lower uterine segment by

1.—Traction on cord to deliver placenta.

2.—Intra-uterine manipulations to free placenta.

3.—Unjustifiable attempts to express placenta hastily and prematurely.

4.—Ahlfeld experienced it as caused by pressure of the after coming head on a comparatively narrow cervical canal.

The diagnosis is made by the presence of the signs of placental separation with failure to express the same. Examination reveals the "hour glass" contraction. The therapy consists in waiting until the spastic contracture relaxes. This can be aided by the use of sedatives such as the Bromides, Chloral, Morphia, etc. In some cases narcosis is demanded.

Another deviation from the normal process, must be considered. In the absence of the normal tonic contractions, either before the placenta is expelled or directly afterwards, the uterus relaxes allowing hæmorrhage of a more or less severe type. This atonic state may have its etiology in a number of factors; over-stretching of uterus from hydramnios or multiple pregnancy; maternal exhaustion in delayed labor; adhesions of uterus to abdominal wall or pelvic organs; retained portions of placenta and membranes; too rapid delivery of afterbirth; too early expression by Crede method (Ahlfeld). Where the atony occurs before delivery of placenta, its spontaneous expulsion is an impossibility and its presence a menace to the life of the woman. The only therapy is immediate evacuation and the securing of uterine contractions.

Relaxation of uterus following the completion of the 3d stage makes us suspect the retention of portions of afterbirth. Prophylaxis consists in a thorough examination of expelled mass, as before stated, and if portions are missing, the institution of the therapy already

given. Where the uterus is absolutely empty—cases of true atony, then, ergot subcutaneously, massage, hot vaginal douches, intra-uterine irrigations will secure firm contraction of uterus and check the bleeding. The massage must be persistent—for hours if necessary. The hand upon the fundus is the surest guide to determine the true state of the uterus. Tonicity once obtained may be held by the use of a tight binder, which will make firm pressure upon the fundus, one or more towels folded and placed beneath binder and directly over the fundus makes a good adjuvant. Secondary atony must be borne in mind—the case kept under close observation.

Various cardiac lesions, arterio-sclerosis, hæmophilia, are complications which may predispose to uterine atony and demand their special treatments.

In conclusion, I wish to mention the following salient points:

1.—Immediately upon conclusion of the third stage, a hot, vaginal douche is to be recommended. The medication of the douche may vary to suit the preference of the attendant. This has among its advantages, the removal of possible foci of infection, introduced during the conduct of labor; the removal of blood clots in the vagina; hæmostasis to various points of abrasion. Unless the strictest antisepsis can be observed in giving this douche, it is better that it be avoided.

2.—Cervical lacerations should be immediately repaired only when hæmorrhage demands.

3.—Perineal lacerations should be immediately repaired. It is not always essential to await the expulsion of the placenta before placing the sutures. Strassman, Keller, Schauta, Chrobak, of the German school, will suture the lacerations—without waiting for the placenta to be expelled. In the Vienna clinics I have seen numerous cases repaired immediately, the subsequent delivery of the afterbirth having no effect upon the integrity of the sutures.

4.—Immediate and routine examination, post-partum, to ascertain the condition of the lower birth canal, is a superfluous and unnecessary interference, with attending dangers to a normal puerperium.

5.—Ergot should be administered only upon indications, as above noted. Ergot should not be injected into the arms. Dr. Korndoerfer, Jr., has seen several cases of marked paralysis of the upper extremities following the injections of ergot in this locality. The wall of the lower abdomen and buttocks are the locations of election.

6.—Do not consider the management of the third stage at an end, and labor terminated, with the expulsion of placenta and secundines. The condition of the uterus following the delivery of these structures must be carefully noted and watched, and labor is to be declared at an end,—that is, the obstetrician is justified in leaving his case,—only after sufficient time has elapsed to advise him that immediate accidents are not forthcoming and are practically impossible.

DISCUSSION.

Dr. Z. T. Miller: If the rules laid down in this paper are correct I would have to mortgage my wife's house to meet the expense of malpractice suits. I invariably deliver the placenta if it is in the lower segment of the womb and the upper portion of the vagina. I do it because I save the woman the distress of waiting for twenty or thirty minutes or two hours. Dr. Cooper once told me that he never delivered one placenta, that it never came away, and he never knew what became of it. That is the most remarkable statement I ever heard, but Dr. Cooper told me that at one time the placenta was retained in the uterus and never was delivered. I believe it is the general practice to deliver a placenta that is in the lower segment of the uterus and upper segment of the vagina, and if I find that the membranes following the placenta seem to be locked in the lower portion of the uterus I do not hesitate to make gentle traction upon them, but I usually do that when I feel with my hand upon the fundus of the uterus that there is slight relaxation there and they are not locked tight and I cannot get them away. I do that invariably, and believe it is the general practice to do that and deliver the placenta right away. When we come into the confinement room we have not all the antiseptics and aseptic facilities the doctor speaks of. we cannot have them. The woman may have an old syringe that has never been sterilized, and may have a pot of some kind of vaseline that we have to use because we have not anything else, and we insert our fingers into the vagina to see what is the condition of the presenting part and what is the condition of dilatation, and we do not do it once but do it a number of times, and if we do not do it some women think we are not giving them any assistance, and we get chided for it if the finger happens to hurt. Notwithstanding this meddlesome midwifery the vast majority, I venture to say ninety-

nine out of one hundred, are never injured by it. I believe that is the experience of most practitioners. I think that all these ideas the doctor presents are scientific, but when you come into practice you find there is a whole lot of them you have to throw overboard, and I believe most physicians do it.

Dr. W. F. Edmundson: The doctor has left us very little room for criticism and he has laid down a great many good points, points I would advise every young man who is starting out in the practice of medicine to use and especially, if he intends to do much in the line of obstetrics, to study well. With all deference to what my friend, Dr. Miller, has said, I believe that no man in these days should go to a case of obstetrics, unles it is one in which he is immediately required, in an unprepared state. I believe if a man goes to a case of obstetrics today and through his carelessness in his own person and in the handling of the case infects that patient, he is criminal, he is doing what is wrong, because we have in these days every facility for the proper care and attention of patients. I believe furthermore that no man should practice obstetrics who has not time to take care of a case properly. To my mind time, patience and cleanliness are the three essentials in the practice of the obstetric art, provided the practitioners have previously received the necessary education. As to the use of the douche, after the labor, I cannot agree that it should be invariably used because I believe that if the case has been properly handled and everything is normal we should not interfere with the natural physiological processes. How many cases of obstetrics do we have in ordinary practice where the douche can be given, as the doctor says, in a perfectly aseptic and antiseptic state? Therefore, I do not believe we should interfer unless it is called for. I never use the douche. I have had a little practice in obstetrics in a period extending over thirty-five years. I have never had a case of hæmorrhage that amounted to anything and required the douche. I have never had an adherent placenta simply because I learned years ago to give my patients plenty of time. I believe that nature in nine cases out of ten will do the work if you wait on her, and I would also recommend the plan the doctor has laid down of holding the placenta in the palm of one hand and placing your hand on the fundus of the uterus and you will feel the uterus is at work, and just give it all the chance to relax, and nine times out of ten the placenta and membranes will be expelled. As for the retention of placentas, I

have been called in consultation several times and have never yet found what I would consider a retained placenta. The doctor got in a hurry and brought the membranes down. He made traction, had drawn it down and had the membrane in the neck of the uterus, and he imagines he has an adherent placenta. As I said before, in the use of the douche my practice is whenever I get a lochia that is at all offensive I commence immediately to use the douche, or if I have a case in which I have had to use instruments, in which the hand was used, then I use the douche, but until I have something calling for it I think the less interference we do in these cases the better it is for our patient and the less the danger of having sepsis following

Dr. Blackledge: In my experience in obstetrical work, which has been rather extensive, (I think I had in the month of June nineteen cases), I just wish to say that I never yet have given an antiseptic douche following labor. I never have given two or three vaginal douches before labor. Those were in cases where I suspected specific infection. I never have had a case of septicæmia. I never have had a case of adherent placenta. I wait for the placenta to be spontaneously delivered. I do not believe it is a good idea to interfere for a time after the delivery of the child. I think that waiting twenty or thirty minutes or longer is a good idea. It gives the woman a rest and gives contraction a chance. I think the less we do in the way of high uterine douches the better, as I feel they are liable to carry in something rather than bring something away.

Dr. Aug. Korndoerfer, Jr.: I cannot help saying that I have had absolutely nothing but pleasure in hearing Dr. James plead in the way he did. There is not a single point in his paper that from a scientific standpoint has not been borne out. Not a single one can you dispute. The paper has been started to be questioned without taking up particular points. In the first place, Dr. James lays down a rule that a man who graduated twenty years ago does not know, in all probability because he has not bought the latest text books, the way to differentiate when the placenta is in the upper uterine segment and attached and when it is in the lower uterine segment and detached. On that diagnosis, the location of the placenta in the upper segment and the location of the placenta in the lower segment, hangs the whole of the therapy of the handling of the third stage. I have heard men say they have practiced so many years and have never had such a condition, and they have the impression that the condition does

not exist. I have a father who has practiced many years longer than I have. He said the same thing to me, that he never had a certain result under certain conditions. I had not been practicing two years before he saw a case with me and had to say the condition did exist. Adherent placenta undoubtedly does exist. Adherent placenta is not the adherent placenta most men say they find. The adherent placenta most men say they have is a placenta in the lower uterine segment. Again, the statement has been made that when the placenta is thrown out from the uterus and it is seen that the membranes are hanging through the cervix, gentle traction on the placenta, and indeed on the membranes, can be made. So it can. It should be made sometimes, but what is the good of doing that when you have a scientific way of delivering the membranes? When the membranes are kinked in the servix they are held there because in the majority of cases they are not attached but are held by the kink and that angle at the cervix holds it. Put your hand below, straighten out the uterus, and you do not need to make traction on the membrane. The membrane drops out. Something has been said about being compelled to use a douche bag the woman has which is dirty. It is dirty in a majority of cases, but you have no business to go where you feel a douche might be called for and be compelled to use the woman's douche bag. You should have your own with you. Have a glass douche nozzle and give the douche yourself. If you have not the time the nurse can give it under antiseptic precaution. If you have not antiseptics with you you had better not go to the case. A point has been made about frequent examinations. The man who makes frequent examinations has no business to make them. The man that is compelled in handling a case to make frequent internal examinations and use the dirty jar of vaseline he may find in the house, when he should have his own in his bag, simply admits he does not know the proper way to conduct an obstetrical case in the light of modern science. An examination should be made when he is called in to see the case. When the membranes are ruptured he can tell from external examination whether the case is progressing as it should. Repeated internal examinations are uncalled for, even though they may be associated with absolutely no danger to the woman. Then the statement is made that in ninety-nine cases out of one hundred you have nothing happens. It is possibly true that in ninety-nine out of one hundred cases mortality does not happen, but

when you speak of ninety-nine out of one hundred cases having no after results from interference, dirty obstetrics, etc., it is another matter. If you examine such a case between seven and fourteen days after delivery, and you ought not to discharge your patient after she has been delivered until involution is complete, which takes from six to eight weeks, you will not fail to find the conditions we find when we follow the case scientifically, that is, that there is a decided condition of morbidity that exists either laterally, posteriorly, or in the uterus proper. I can say from absolute statistics, from following up cases, keeping records of them, having them where you can put your finger on them, you cannot help but agree with every point Dr. James has made in his paper.

Dr. Z. T. Miller: I enjoy being jumped upon, and feel I have been jumped upon with both feet by the gentlemen who has just sat down. I also desire to make the statement that I was probably in practice when the gentleman was in his teens, that a man's experience is his best guide, and that that is the rule which every man adopts when he comes to face the obstetrical or any other cases, no matter what they are. It is his experience that grows with every man who has a particle of independence in his work. When I come to a case of obstetrics I treat that case, and if the after results are satisfactory to me and to the people whom I attend that is my experience, and that is going to be the rule of practice with me as long as I practice obstetrics. For a man to lay down a whole lot of rules that it is impossible in most cases to observe, is something to which I have no objection. He can carry a whole bag full of stuff with him, with all his asepsis and antisepsis and syringe, if he wants to, but I have not found that absolutely necessary. I examine a patient the first thing when I go to her. If I think it is necessary to make frequent examinations, I do so. If it is not I do not. I lay down no hard and fast rule for managing any case, whether of obstetrics or any other, that I am called upon to treat. I treat them individually, and I meet the exigencies of that case in such a manner as I believe will terminate if successfully. That is what I do when I practice obstetrics, and I would not care whether every German professor that laid down a rule to govern everybody was against me or not. My experience is the law for me. I am an individual, I pratcice with individuals, and the things that I do have been successful for me, and that is the criterion I go by, and not the recommendation of any other man.

REPORT OF THE

SECTION OF GYNÆCOLOGY.

A Short Review of Gynæcology, by N. F. Lane, M. D.
Myofibrosis Uteri, by T. J. Gram, M. D.
Gonorrhœa in the Female, by D. B. James, M. D.

A SHORT REVIEW OF GYNÆCOLOGY.

N. F. LANE, M. D., PHILADELPHIA.

It is my purpose in writing this paper to touch upon a few gynæcological subjects that seem interesting to me, because of the fact that in them the ordinary methods of cure are unsatisfactory.

Such subjects are always interesting to those who are trying to improve methods and increase the percentage of cures in their work.

The first subject I would ask you to consider with me is cancer, a subject that is interesting all departments of medicine because of its occurrence in all portions of the body.

The etiology is being studied by a large number of observers; but it seems we are little nearer its solution than we were ten years ago, except that all investigation (even though it end in failure for the time being) is a step towards final success.

Possibly with this question satisfactorily answered we shall be in a position to cure our cases, perhaps we shall not, that is a question to be settled in the future.

There are some who adhere to the parasitic theory, but I should say the majority are not in favor of this.

In regard to operative procedures, there has not been much change in opinion during the year.

There are those who by slightly different methods clean out the entire pelvis of all glands and connective tissue possible, doing as thorough work as in the modern operation for cancer of the breast.

The immediate or operative mortality of these operations is so high and the liability of injury to adjacent structures so great that even in the hands of the *most skillful* operators this method seems of doubtful utility, and when the question arises in the mind of the ordinary operator, it should not be given second thought.

In addition to the risk previously mentioned there remains the fact that the ultimate result in those who survive the shock of operation is not such as to give us much encouragement; recurrence is the rule.

The position taken by Dr. John G. Clark seems to me to be the best for the average operator, and possibly, even, for the most expert.

I quote from his review in "Progressive Medicine," for 1906. After reviewing the subject in detail, he concludes, in part, with the following statement:

"Therefore, it seems to me that we come back to the original proposition which I started in last year's Progressive Medicine, that the extremely radical operations which have as a step the extensive dissection of the lymph glands, closely associated with the large veins and the deeper cellular tissue of the pelvic wall, carry with them such grave operative dangers that it would be best to leave out this step in this operation and confine ourselves to the radical extirpation of the locally involved tissues, the vaginal vault and the parametrium."

On reading the various reports of operators upon cancer of the uterus one is struck by the great dissimilarity in their conclusions and results. This is partly owing to the fact that some are not careful to designate the location of the growth, whether it be of the cervix or body. By so doing results cannot be uniform, as cancer of the cervix is almost sure to recur, while that of the fundus is quite frequently cured; in fact, if removed during the earlier stages the prognosis is quite favorable.

The electric cautery and clamp seem to be growing in favor, especially in the removal of these malignant growths of the uterus.

RETRO-DISPLACEMENTS OF THE UTERUS.

The question of the management of retro-displacements of the uterus is still being extensively discussed.

The usual operations are far from satisfactory in their ultimate

results, as shown by the number of papers presented upon this subject, and the different methods of treatment advocated.

While some seem satisfied with their results, still I think that most of us feel that there is some fundamental principle that we have not grasped in the management of some of these cases.

Some statistics are very favorable as to the results of certain operative measures, but in spite of statistics we know that with the ordinary operations we do have relapses, and that if we follow our patients for two or three years we find that these relapses are not as infrequent as they should be.

It seems to me that if we cannot, with some degree of certainty, promise our patients a cure, we can hardly recommend opening the abdomen for the correction of a displacement, unless there is some inflammatory or other condition that requires a section in addition to the displacement.

I have seen relapses following a suspension of the uterus occur in a year or less, and in one case of which I have knowledge the uterus was retroverted before the patient left the hospital. I witnessed this latter operation and know it was properly performed. Others have reported these same results or lack of results.

Therefore, as I stated before, there must be some fundamenal principle that is not thoroughly grasped, or these relapses would not take place.

Those of us who in suitable cases use a pessary regardless of the cry that is raised against them by gynæcologists, who would operate all cases, know that in order to keep a uterus in place we must have certain conditions present, and one of the most important of these is our ability to keep the cervix back in its normal position, and that, if from the presence of a short anterior vaginal wall, or any condition that holds the cervix more or less fixed in a forward position, it is impossible with a pessary of suitable size to keep the fundus forward.

Now, in the treatment of this displacement by surgical measures, the same principle obtains, the only difference being the fact that the suspension will hold a little longer than the pessary.

I do not believe a suspension or any operation, unless it be an *extensive fixation*, will be permanently sucessful unless the cervix *can be placed back in its normal position without tension.* I also believe that following an operation of this nature a suitable pessary

should be worn for from three to six months; this I consider quite important.

Beyea reports some 272 cases of suspension with only four recurrences *to his knowledge,* and three of these occurred before the patient left the hospital. Evidently he did not examine the other 268 cases after they left the hospital, and, therefore, cannot determine the number of recurrences. Such statements are misleading and incline us to be too optimistic in regard to this operation.

In sharp contrast to the above is the conclusion reached by Holden (Johns Hopkins), who has followed the post-operative history of 445 cases of suspension, and concludes that 60 per cent. are cured symptomatically in which the displacement was the prominent abnormal condition. He also states that the results are better where there is a relaxed outlet, if that is also repaired, than are the results of simple retro-displacements alone.

This statement is very significant, and to my mind bears out the hint that I threw out previously, that it may be, and probably frequently is, the short anterior vaginal wall or something that holds the cervix forward, that is the cause of many failures.

In regard to pregnancy following a suspension properly performed, it seems to be the opinion of nearly all that the operation does not materially interfere with normal labor.

The operation of Montgomery appeals to me as being theoretically, at least, the best for these cases where the round ligaments are well developed. It is practically an Alexander operation done from within the pelvis. It leaves the organs anatomically normal, leaves no intra-abdominal ligament as does a suspension, utilizes the thick muscular end of the round ligament, and allows of other work that may be necessary in the pelvis.

FIBROID TUMORS.

A few words in regard to fibroid tumors of the uterus. For some time past there has been a great deal written in regard to the fibroid heart; the idea being conveyed that the heart partook in a way with the growth in the uterus; in other words, that the fibroid in the uterus is only a part of, or local manifestation of, a general or constitutional disease. This matter has been carefully investigated by Winter. His examinations were made by an internalist before

operation, and by the same man in from six months to nine years after the operation and without reference to his previous diagnosis.

His conclusions are as follows:

"1. That valvular disease in itself is uninfluenced by the removal of the fibroid.

"2. That dilatation of the heart in connection with valvular disease, which may well be due to the anæmia present in a given case, may disappear after the general condition is improved and the anæmia is cured.

"3. That disturbances of compensation in valvular disease which are due to a dilatation or a degeneration of the heart muscle in connection with the anæmia may be relieved. Therefore, in anæmic myoma patients having valvular heart disease, operation will be beneficial by preventing secondary (anæmic) dilatation and degeneration.

"4. That primary myocarditis in myoma patients, who are not anæmic, will not be influenced by the removal of the myoma. With coincident anæmia one can presumably prevent fatty degeneration by operating. The same is true of brown atrophy.

"5. Dilatation of the heart due to anæmia is surely relieved by curing the anæmia.

"6. The cause of heart lesions in myoma lies in the anæmia. Therefore, myoma must be removed with the object of curing the anæmia.

"(*a*) In valvular disease and primary myocarditis as quickly as the hæmorrhage is greater than customary. No internal or palliative measures will do in such cases.

"(*b*) In the absence of diseased valves and primary myocarditis as soon as the symptoms of dilatation develop."

In regard to that much discussed question, the treatment of fibroid tumors, we have as usual both extremes represented, some would operate few, others would operate all cases.

It is a fact as claimed by those who advocate operating all cases that when done early, before complications arise, or serious symptoms develop, that the operation is attended with little risk, and that the patient is free from anxiety as to future trouble. On the other hand, most people prefer to take the risk on their *own individual condition*, and not be lumped with a hundred or more cases, and be told that if the whole hundred who have small fibroids would be

operated, a larger number would be saved than if they are allowed to drift along until forced to submit to operation.

Now to me there are indications that call undoubtedly for the removal of such tumors. Very excellent authorities take opposite sides upon this question, so that the middle ground seems to me to be the most logical, and one upon which any of us would stand if the question came home to us individually. Would you recommend the removal of a small fibroid giving absolutely no or very little inconvenience if it were your own wife, mother or sister?

My indications for the immediate removal of fibroids are excessive hæmorrhage, rapid growth, interference with the function of bladder or rectum, pressure symptoms or complications that may make the tumor dangerous to the patient. The younger the patient the more urgent, usually, the need of an operation.

We all admit that malignant degeneration may occur, and that a fibroid may be associated with a malignant growth as a complication; but that does not necessarily call for the extirpation of every fibroid.

If the fibroid is small enough to be symptomless, we surely ought, in most cases, to have means at our command to determine if it be malignant or not by microscopic examination of tissue obtained by curette or scissors, just the same as any other suspicious case.

Deaver reports 250 operations for fibroids in American Medicine of April 15, 1905, and thinks the safest attitude to assume lies between the two extremes. He recognizes the fact that malignant degeneration and association does occasionally occur, and also that pyosalpinx, adhesions, etc., are found in quite a number of cases of myoma; yet he says there are many women in whom fibroids of considerable size are provocative of no especial discomfort, and in whom death finally occurs from some intercurrent and entirely independent disease.

He believes they should not be removed unless producing symptoms, but that then the removal should be prompt before the patient has been weakened by toxæmia, hæmorrhage or sepsis. Myomectomy he does only in young women, in suitable cases where the tumors are sub-peritoneal and few in number. He always, when possible, leaves a healthy ovary in women who have not yet reached the menopause, unless it unnecessarily prolongs the operation.

Most gynæcologists have given up the treatment by electricity except in such patients as absolutely refuse operation.

Engleman reports considerable success from the use of ergot, tamponade, hot douches, rest in bed, galvanism and general measures to build up the patient's health.

The same rule holds good in the matter of fibroids as in other pelvic troubles; those who can afford continuous treatment and can take good care of themselves can sometimes safely try palliative measures.

DYSMENORRHŒA.

Another subject that is of interest to all practitioners of medicine is dysmenorrhœa. I do not speak of the dysmenorrhœa that accompanies some displacements, inflammatory or other demonstrable lesion, but those cases which occur in patients in whom we can find no lesion or cause, except, perhaps, an anteflexion, which we know is not by any means always provocative of dysmenorrhœa. Those cases that are really of interest and resist treatment are those that begin shortly after puberty and gradually get worse.

The proper treatment seems to be hygienic with careful prescribing covering the general or constitutional condition as well as the local symptoms. The general treatment of the patient is very essential, and consists of good food, regular hours, regulated exercise, usually of a much more violent nature than such patients are inclined to take.

All these things must be governed by the kind of patients we are dealing with, and the results attained. I have found, for instance, that these patients are better when playing tennis, and one was decidedly relieved by dancing, showing, I think, that it is very often a sluggish circulation in the pelvis that is at fault.

The failure of the above usually means some variety of surgical interference, the most common being a dilatation and curettement.

Whether this procedure is curative from the fact that it secures better drainage of the uterus, or because it sets up some stimulating or nutritive effect, I cannot say.

Holden has made a study of ninety-five cases dilated and curetted at the Johns Hopkins. He classes the cases where the organs are

normal or poorly developed as primary, those where lesions are demonstrable as secondary.

I quote, in part, some of his conclusions.

In 40 per cent. of all primary cases successful results may be looked for after curettement. By "successful results" is meant entire or very great relief from dysmenorrhœa for a year or more, with or without, subsequent return of the trouble. No relief whatever may be expected in 30 per cent. of the cases. Relief of the remaining 30 per cent. varies in degree and duration.

If the patient's general condition is not improved little relief will be given by the operation in those whose general health is poor.

The prognosis is better in those cases in which the pains begin the day of the flow or the day before, are sharp in character, and last but a day or two. The prognosis is worse when the pain begins several days before the flow, are dull in character and last several days or throughout the flow. The prognosis is not good when the organs are not well developed. Apparently maldevelopment causes dysmenorrhœa.

He reaches a number of interesting conclusions not stated above which may be found in American Medicine of November 4, 1905.

There is a secondary change that I believe sometimes occurs in long-continued cases of dysmenorrhœa that I seldom see mentioned. I refer to a varicose condition of the broad ligaments. It is my impression that these veins are often the cause of failure in those cases where relief is not experienced from a dilatation.

These cases begin as an ordinary dysmenorrhœa, get worse and worse, and, finally, after some years of suffering, they begin to have pain, not only at the menstrual period, but also between periods, and sometimes are even relieved during the flow. This condition is not easily demonstrated physically, unless the abdomen is opened for some complication, when it can easily be seen.

It is also well to bear in mind the work of Eitel in cases classed as ovarian dysmenorrhœa. He has been removing the capsule of the ovary from the hilus to the cortex when it is thickened. He reports good results.

The negative current of the galvanic current will dilate the cervical canal, and is worth a trial, especially if the patient does not wish to take an anæsthetic and go to bed. This treatment should, however, be carried out under strict antiseptic precautions.

MENORRHAGIA AND METRORRHAGIA.

The subject of menorrhagia and metrorrhagia occurring at or about the menopause is being studied, but as yet nothing very definite has been determined. I refer to those cases not caused by new growths or disease of the mucous membrane that can be cured by a curettement.

The probability is that the cause is not always the same, but it appears that some at least of this class of cases are caused by a faulty process of evolution in the uterus at this critical period in a woman's life.

This process may be an abnormal increase in the connective tissue or fibrous elements or a lack of the normal increase in the elastic tissue, thus interfering with the normal closure of the blood vessels.

The treatment of these cases is medical, with hysterectomy as a last resort.

These cases always give us considerable worry for fear they may possibly be of a malignant nature which has eluded our search.

DISCUSSION.

Dr. J. H. McClelland: There are two or three matters I wish to touch upon in this very excellent paper of Dr. Lane's. One is as to the matter of fixation for retroversion. Cases of retroversion that have gone on for years until the ligaments and supports of the uterus have been entirely relaxed, are absolutely incurable. Something must be done. There you must support the uterus by tampons, as has been often done, which lasts possibly for two or three hours, or you can put in a well-fitting pessary which will do very admirable service where better cannot be done, but there are many cases where there are adhesions or where complications exist and nothing will keep that uterus up unless you open the abdomen and fasten it. I admit that a certain proportion of those cases will recur, will break away, the ligament that is formed there will become stretched and thin and non-effective. It only indicates that we must take very much greater pains with those cases. When we find that we have one of those inveterate cases of retroversion we must take very special pains to fasten the uterus in its natural position. I believe Dr. Lane

has touched on what is the prime cause of prolapse, that is, a short anterior vaginal wall. There is no doubt in my mind but that in spite of that very much can be done. With regard to fibroids, I think the course suggested by Dr. Lane as coming from Dr. Deaver possibly is right. It is right in nearly everything to take the middle course. There are many cases of uterine fibroids that run along year in and year out without causing any great trouble, and where that is the fact I think we should let it alone, or at most try what we can do by internal medication, and it is true that there are cases which, either with internal medication or in spite of it, do get better. I have known it over and over again when I have proposed to operate on patients, thinking they ought to be operated, and have been refused, and I have found that the trouble gradually got less and possibly disappeared, but when the fibroid is growing without any question of doubt it is very much safer to take it out than to leave it in. In the matter of dysmenorrhœa, I think there are many cases that will be remedied by dilatation and possibly repeated divulsion, once not always being sufficient, but I would very seriously object to the common practice of curetting all of them. There are many of them absolutely healthy.

The endometrium is very little if any affected, and when the cervix is thoroughly dilated the trouble, if it is a slight trouble as in many young unmarried women, will disappear of itself. I do not believe that we should scrape out the endometrium of every uterus that is dilated for dysmenorrhœa, or many other things. We get along very well without it.

Dr. J. D. Boileau: In considering conditions which have such different causes, and in which treatment so often is quite unsatisfactory, it is necessary for us to consider all means at our disposal before resorting to radical operation. The doctor has simply touched on one of the radical means at our disposal, and unfortunately one which so many of us make so little use of, that is, electricity. Most homœopathic physicians are very poorly equipped in that direction, both as far as the apparatus is concerned and unfortunately, too, as far as knowledge of the use of it is concerned. Many of these conditions are due perhaps to nutritive disturbances, and the proper application of electricity will do much for us, particularly in conjunction with other measures. The cataphoric applications in which certain medical substances are forced into the tissues will do much in

selected cases. I think if our homœopathic friends would first acquaint themselves with the uses of electricity, especially in gynæcology, for it is more applicable there than in any other one direction, and after having done that would equip themselves, they would find it would cure many conditions that are otherwise incurable and would palliate many others.

Dr. M. M. Fleagle: I want to call attention to one thing among the many things that have been suggested. There is probably one that has received less attention than many others, and one which probably should have much more attention, and that is the application of homœopathic remedies. We are supposed to be a meeting of homœopathic doctors, and are not all surgeons, and while those adjuvants are useful and sometimes necessary, yet it has been my experience that many good things can be accomplished by the careful selection of the remedy. It does not make any difference whether it is a fibroid or dysmenorrhœa or what it is. I believe in the use of electricity and use it myself, but I use a homœopathic remedy probably one hundred times to one application of electricity. In the treatment of fibroids I have found that under the judicious selection of the homœopathic remedy, no matter what it may be, according to the constitution of the patient, the fibroids for some reason stop growing and stop bleeding, and the general condition of the patient is very much improved, and I think that before subjecting patients to any radical treatment a thorough test of the homœopathic remedy should always be made.

Dr. M. J. Chapman: It would be very difficult to add to what has been said. We all know that surgical cases should be referred to the surgeon and medical cases cared for by those who are masters of the homœopathic materia medica, but it is a most difficult thing in many cases to decide when the case becomes surgical and ceases to be medical. There is one subject that I want to speak of. The doctor refers to some of his cases with relaxed conditions and prolapse of the organ. In many of the cases where any surgeon would say that suspension was the correct treatment, but on account of circumstances or the inflammation of the patient that would not be permitted, I have used toilet paper instead of wool or cotton for the tampons, and by that means have been able to retain the uterus in proper position, and I think if you will try it, I do not say it is better than fixation, but it is a means of making the patient comfort-

able where the other means cannot be carried out. Four or five sheets of ordinary toilet paper saturated with a twenty-five per cent. staphysagria cerate and applied will keep the uterus within the pelvis. It is a simple thing, but a great help in some of these cases that are very troublesome.

Dr. J. D. Keller: While the subject of electricity was touched on in cases of dysmenorrhœa, I will simply say that two-thirds of all cases can be relieved if not permanently cured by electricity. The time is not here for the explanation of how it is to be done, but it is well for everyone that is equipped with the present appliances of electricity, especially the high tension battery, the galvanic current and the Morton Radiator, to get good practical and painless results.

Dr. N. F. Lane: In regard to electricity, I have made a number of experiments in the matter of dilating the cervical canal with the negative pole of the galvanic current, and have tried to keep track of some cases. They are mostly girls and young women who are working, and they drift away from me, and I cannot keep track of them long enough, but this I am sure of, that they are relieved for some months, and just as thoroughly relieved as by dilatation with a steel instrument. There is only one danger, and that is the danger of sepsis. I feel when we use electricity we think there is no danger of carrying sepsis into the cervical canal or into the uterus, when we introduce a sound, if there is a little electricity along with it, but we ought to be just as careful with our appliances in those cases as with dilatation by a steel instrument. I use a very weak current, The text books, unless it be the very latest ones, are entirely off on the matter of current. They will tell you to give sixty or seventy milliamperes when you do not want ten. You do not want more than four, five or six. When I first began work I gave my patients a great deal of pain. In fact, I found I could not begin to use that strength, and you do not dilate any better or quicker than with a weak current. Now I use a current that does not give the patient pain. It may give them a very little inconvenience, but no real pain.

Q. How long continued and how often repeated are the treatments?

A. I suppose a sitting lasts ten or possibly fifteen minutes, using graduated sounds, introducing one after the other the same as you would if you were dilating with a steel instrument. These are repeated once a week or twice a week according to results, gradually

letting up on them until perhaps you use them once a month and then cease. The use of medicines is very important, and I supposed that being a homœopathic society you all did use medicines, and so I did not go into it very thoroughly, but I do believe we can carry many patients with fibroids through and past the climacteric by the use of medicine and hygienic methods and thus save operating. I remember when I first went into the dispensary, fifteen years ago, I had as a legacy from, I guess it was Dr. Smedley, an immense fibroid in a colored woman. He had been trying to get her to be operated for years. We would try to get her to come in, but she would not. She probably wanted her fibroid, for she stuck to it. She would get along very well, except from the weight, and inconvenience of the thing, until she would have some obstruction. Then she would be constipated for days, or maybe a week or two. That would be followed by diarrhœa. Then she would be better for a little while, and about that time she would come to us, usually with this diarrhœa. Colocynth was the medicine that was always indicated and which she always received, and while at one time she had engaged to come into the hospital the next week, she failed to turn up, and from that time she gradually got better until from her appearance the last time I saw her you would not know she had a fibroid. It only shows what you can do to them. I would not recommend that treatment of fibroid at all times.

MYOFIBROSIS UTERI.

THEODORE J. GRAMM, M. D., PHILADELPHIA.

There is a form of uterine disease not infrequently encountered in women approaching the climaxis, whose most striking symptom is metrostaxis. When this symptom is manifestly attributable to malignant disease, or to a neoplasm, or to adnexal abnormalities, or infection, its import is comprehensible; but when these well known causes of uterine hæmorrhage are absent the case is not so plain. The variety of names which have been more or less loosely applied indicates the diversity of view entertained respecting the pathology, for we read of chronic metritis, fibroid uterus, myofibrosis uteri,

chronic subinvolution, hyperplasia, chronic endometritis, senile endometritis, preclimacteric bleeding, and lately metrorrhagia myopathica.

Women thus affected have uterine hæmorrhage as the prominent symptom. At first the bleeding attends the menstrual flow, so that the latter is said to be profuse, and later, also, the menstrual period is much prolonged, and this form of bleeding continuing for a certain length of time changes in type so that the metrostaxis is metrorrhagic in character, or occurring at other times than at the menstrual period. On examination the genitalia externally will, of course, display the usual evidences of approaching senility, the ovaries are atrophic, there is no adnexal disease to account for the hæmorrhage, and no neoplasms. The cause of the hæmorrhage is not apparent from the condition of the cervix, and the non-sanguineous discharge from the uterus will be of such a character as is usually associated with so-called endometritis. But the uterus may be found considerably larger and softer than natural, and its cavity is not only elongated but especially widened. Pain is not a usual accompaniment, and the distress is only of such a character as is readily explainable by the size of the womb. These patients, as a rule, have been frequently pregnant, and it may be that the puerperal periods have not been attended by distinctly recognizable conditions of infection.

Years ago Scanzoni called attention to chronic metritis and insisted that this was the most frequent disease affecting women. He recognized a stage of infiltration, characerized by hyperæmia and serous or sanguineous infiltration of the uterine tissues, in consequence of which the latter are softened, loosened up and thickened, and a second stage of induration when the uterus is anæmic, hard, with decrease in the size of the vessels. After the introduction of the curette, which gave an opportunity for examining the structure of the endometrium, the changes usually found in this portion of the organ were thought to explain the entire conditions present. More recently the study of bacteria in their relation to disease processes suggested the view that infection was the underlying factor to which the mesometrial changes were secondary. Theilhaber and Meier* believe that primary diseases of the mesometrium occur fre-

*Arch. f. Gyn., Vol. 66, H. 1.

quently, and that many cases of so-called endometritis are not inflammatory conditions, but that they represent conditions depending upon disturbances of nutrition, the result of stasis, induced by disease of the mesometrium. In fact, it has never appeared to me that a number of writers have given a whole-hearted adherence to the view of the inflammatory origin of so-called chronic endometritis, and a number have said as much. Furthermore, there has been a notable failure to demonstate bacteria present in typical specimens of chronic endometritis, and one cannot avoid the question why the endometrium should not at some time, as at a menstrual period, during the prolonged continuance of the hypothetical inflammation there, have thrown off the evil influence of the products of bacterial invasion, if such were simply the underlying cause. On the other hand, the authors just named point out, with much show of probability, that contraction of the uterine muscular tissue has much to do with determining the amount of blood not only in the pelvis but self-evidently also in the tissues of the womb itself. This point is further exemplified by Clarke* in his studies of the causes and significances of uterine hæmorrhage in cases of myoma uteri. It seems superfluous to refer to the fact that the most successful means of overcoming post-partum hæmorrhage is to bring about contraction of the uterus. So also is it well known that in some conditions of sepsis attending induced abortion, when the septic condition has impaired uterine tonicity, that the efforts to clear out the uterus are attended by frightful hæmorrhage. It follows, therefore, that if the contractility of the uterus is impaired, either by mesometrial or vascular changes, that venous stasis will result, and this will be followed by consecutive hyperplasia both in the mesometrium and in the endometrium, and the vicious circle is complete. The contractility, the tonicity of the uterine tissues, therefore, must be a factor to be reckoned with in any correct estimate of uterine diseases aside from infectious and malignant diseases.

We should next pursue a brief inquiry into the causes of impaired uterine contractility. First of all, what are the apperances of the normal uterus? In attempting to answer this question we encounter the fact that no single set of appearances can be described, since the uterus is an organ which in its life history is subject to

*Johns Hopkins Hospital Bulletin, No. 94.

great variations in its histological structure, all of which are well within normal and physiological limits. Meier has carefully studied and illustrated this subject particularly with reference to the relative amount of muscular and connective tissue, and has found that up until the tenth year the uterine walls are composed of about twenty per cent. of muscular tissue; from the tenth to the twentieth year the percentage rises rapidly to about sixty per cent. during the next ten years, representing the reproductive period, and which time therefore, will include conditions closely associated with pregnancy and the puerperal state, the percentage again rises abruptly to ninety per cent.; from the thirtieth to the fiftieth year, aside from the influence of pregnancy, the percentage remains approximately at about sixty per cent., but after that until the seventieth year the amount gradually falls to twenty per cent., a proportion similar to that existing in the infantile uterus.

We are at present mainly concerned with the conditions existing between the twentieth and fiftieth year, or more particularly those associated with pregnancy. When pregnancy occurs the amount of muscular tissue increases greatly, and after delivery again disappears; in fact, sinks below the relative amount existing before conception, while the newly formed connective tissue, not being capable of such rapid retrograde metamorphosis, remains relatively increased in quantity. It is on this account that after every pregnancy the uterus remains larger than formerly. The parous uterus is, therefore, larger, wider and softer than the nulliparous, its cavity is more roomy, mainly wider, the secretion also is increased and partakes more of a mucous character than that of the nulliparous, because of the changes in the endometrium, hyperplastic in character, both glandular and interstitial. A number of authorities could be cited to sustain these statements, but certain clinical facts also confirm their truth, as, for instance, the tendency to weakness of the labor pains in women who have borne often, the greater loss of blood at labor and the well known tendency to post-partum hæmorrhage and the greater likelihood of subinvolution remaining. Furthermore, if the vessels of the pluriparous uterus be examined it will be found that they, too, have taken part in this fibroid change of the uterine structures. As a rule, they are then seen imbedded in increased areas of connective tissue, and do not lie in such close approximation to the muscle. Many blood vessels have disappeared

because no longer required, and their former site is marked by a strand of connective tissue. The coats of the vessels remaining are greatly thickened, so much so that their lumen is materially encroached upon, and this thickening affects mainly the middle coat. Certain degenerative changes also have taken place. As recently recorded by Anspach* there are deposits of fibrous tissue found within the media and the line of demarcation between the media and adventitia is obscured. The elastic tissue of the media is increased. The internal elastic lamina is no longer smooth, unbroken and regularly wavy in appearance. It is thickened and split into several layers. In the larger arteries the external elastic lamina presents similar changes. With the hæmatoxylin-eosin stain the media appears like hyaline tissue, is granular, and its nuclei are diminished in number. Not to dwell more fully upon these minute changes, we may say that the periarterial degeneration consists mainly in deposits of clumps of elastic tissue in which few fibres can be seen. These are briefly the changes found in the uterine structure following pregnancy, and all authors are agreed that they are easily seen and exist to an extent proportionate to the number of pregnancies.

If we analyze the clinical results of these minute changes, we are able to comprehend the underlying causes of preclimacteric bleeding in cases of myofibrosis uteri.

Some authors regard the vascular changes as the main cause of the hæmorrhage, and Reinike† has called special attention to the sclerosis constantly found; he thinks that the sclerosis of the uterine vessels has induced a stiffness of the walls, in consequence of which they have lost their power to contract, and when the pelvic organs become congested, menorrhagia results. He appears to believe that the connective tissue changes result from diminished nutrition depending upon the vessel changes, so that muscular tissue is replaced by connective tissue. Theilhaber,‡ on the other hand, has pointed out in a previous study, that these arterial changes are not produced in the uterus as are similar conditions in other parts of the body, as, for instance, in alcoholism, syphilis, gout, nephritis, etc., and neither are localized hæmorrhages or extravasations as-

*Amer. Jr. Obs., Vol. 53, 17.
†Arch. f. Gyn., Vol. 53, 340.
‡Arch. f. Gyn., Vol. 62, 415.

sociated with them. In the further pursuit of this subject Anspach has made a most admirable study of the elastic tissue deposits in and about the vessels in their relation to myopathic metrorrhagia, but his results have not been conclusive nor apparently even satisfactory to himself.

As the question now stands, I think we may safely accept Theilhaber's explanation. He believes that the uterine hæmorrhages are due to the hyperplasia of the connective tissue and the associated atrophy of the musculature. The results of microscopic examinations have shown that every pregnancy diminishes the amount of uterine muscular tissue; that the same effect is produced by advancing age, and also frequently occurs for some years before the climaxis. A review of some of his further studies goes to confirm his general view of what is practically a muscular insufficiency. Thus, for example, the menorrhagia about the time of puberty is due to this cause, for then there is a *hypoplasia* present, and the congestion is far in excess of the ability of the muscle to contract. In some of the acute infectious diseases like typhoid, variola, influenza and many others, there is a definite degeneration as the underlying cause of the diminished contractile power of the uterus. In adnexal diseases and inflammations of the pelvic peritoneum the uterus becomes hyperæmic, œdematous and considerably enlarged. Here the menstrual flow is usually increased in the early stages because the induced congestion is greatly in excess of the muscular ability to regulate by its inherent contractility. Later, when the inflammatory processes latterly have in a measure subsided and remain in a chronic state, the menorrhagia also subsides, with a consequent diminution in the size of the uterus. In myoma of the uterus the tumor often itself acts as a foreign body which prevents uterine contraction; in most cases the tumor induces an excess of blood with which the uterine contractility is unable to cope, even in spite of the hypertrophy of the muscular tissue often found in these cases. The endometrial changes are more and more being looked upon as due to nutritive alterations secondary to the existence of the tumor.

I desire now to report in brief a typical case of myofibrosis uteri, which was quite threatening in its clinical manifestations. The patient, a married lady, aged 54 years, had given birth to fifteen children, only two of which were somewhat premature; no miscar-

riages; last child fourteen years ago. About fifteen years ago she began to have menorrhagia, and later, the hæmorrhages occurred at other times than at the menstrual period. Sometimes the bleeding continued for three or four weeks, and was always quite profuse. She says she has always had leucorrhœa like glue; for the last six months the leucorrhœal discharge was watery. She made no serious complaint of pain. The patient is rather stout in body, and although not losing in weight, is becoming quite pale and blanched in appearance. The abdominal walls are quite fat and the legs are somewhat œdematous, especially the right one. On examination the external genitalia were pale and showed senile atrophic changes; perineum lacerated and relaxed; cervix somewhat lacerated, but only slightly eroded; vagina and cervix unusually pale; cervix lying quite far back in the pelvis; the uterus was quite movable; fundus anterior; corpus enlarged to about the size of a three or four months' pregnancy, and the left anterior uterine wall appears on touch to have a prominence from a fibroid tumor; the probe easily enters the uterine cavity to a distance of four and a half inches. The patient having received careful medical treatment for about a year with rather unsatisfactory results, I advised operation, and performed supra-vaginal hysterectomy. Of the operation itself I have no intention to speak at present, except to say that the usual technique was carried out, but from the moment the attempt was made to insert the first ligature in the broad ligament, which is the first step in this operation, an amount of hæmorrhage was encountered which was nothing short of appalling. Every manipulation involving the wounding of tissue during the entire operation was attended by this startling hæmorrhage. After serious difficulty, however, the operation was successfully completed, and the patient made a recovery which was absolutely free from the slightest untoward event.

On examination of the specimen no fibroid nodule was found, as previously indicated by the vaginal examination. The endometrium showed no neoplasm, but seemed hypertrophied. The one noticeable feature about the uterine walls, however, was the unusual vascularity and the remarkable thickness of the uterine walls, amounting to two and a half inches. The ovaries were not adherent, and were small, atrophied, senile. The fallopian tubes showed no notable changes, except great vascularity about them, and especially in the broad ligaments. These considerations just named seemed to

indicate that the pathological condition in the case would be revealed by a study of the structure of the uterine walls, and such proved actually to be the fact. The changes here found on microscopic examination may be briefly stated, since any detailed account would simply be a repetition of the conditions already found by others who have studied such cases. There was no evidence of distinct fibroid nodules, but the tissues themselves had undergone fibroid changes. The muscular bundles are distinctly smaller than normal, and are profusely interspersed by fibrous and connective tissue. Atrophic changes are distinct. Toward the endometrium, however, there are evidences of hypertrophy. The vessels themselves traverse wide areas of connective tissue. The changes already described as occurring in the tunica media were beautifully exemplified in the microscopic slides.

DISCUSSION.

Dr. M. J. Chapman: I want to thank the author of this paper for what he has given us, but I want to call attention to the fact that he has described this condition where the diseased form has progressed and developed without restraint. I graduated in medicine long since. Much of the present day science I do not know. There is a good deal about the conditions he has described I have been compelled to know. Years ago we all learned that typhoid fever under the influence of the homœopathic remedy was not the same condition as is described in our books on typhoid. It did not have the same course nor the same termination. It is just as true of these fibroid tumors that he has described. I live in a city where there are famous surgeons. We all know that when there is a fibroid tumor it may degenerate and must be removed, but there are persons who will not take your opinion or mine or that of a good surgeon. For instance, a woman came to me and there was no question about the condition that existed. Her father was blind and feeble and depended upon her. She said, "I cannot place myself in jeopardy. I must care for him." Through a course of care and medicine the condition was not only checked but decreased, and after some three years of constant attendance no enlargement could be found. There was another case where the woman's mother and uncle, both feeble and aged, had to have her care, and under the influence of

remedies and care the condition was controlled. It seems to me, if we consider the constitutional conditions and symptoms, it is possible to control this condition. With a little more study and care we may prevent these cases that have a successful operation but cannot rally from the shock of the anæsthetic. You may never have heard of such cases, but we sometimes hear of them in New York and elsewhere. I cannot let this moment pass without urging study and care to prevent the full development from its incipient condition, of the condition which the doctor has described so beautifully. If you know a patient with the beginning of enlargement, under suitable medication it does not go on to the point where pressure and other disturbances make excision absolutely necessary.

Dr. T. J. Gramm: I confess that I have not finished my paper, inasmuch as that paper taken by itself does not represent my views in their entirety. If I had known I should have found such an admirable co-adjutor or conspirator in the doctor who has just spoken, I should certainly have added the names of two authors to this paper, because I want to say that I am not altogether convinced that operation is the only treatment in this condition. The facts go to show that it is not the only treatment. I had a case, which is now perfectly well, of a similar condition to this, a woman who had had a large number of children, and her condition was practically identical with that of the case reported, with the difference that it may possibly not have been quite so severe. I was called to that case with the understanding that this woman would not, under any circumstances, be operated upon. Of course, we must concede to our patients the privilege of deliberately selecting whether they will undergo the risk of certain things or not. I might say, however, at this point, that I am not at all in sympathy with that idea apparently cropping out every now and then, to suppose that people who can operate do so unnecessarily, and because they possess the ability to operate they have lost some portion of the conscientious scruples which every physician has against unnecessarily jeopardizing the life of any patient. I explained to this patient that it would be a long time before we could expect any difference in her condition, and she said she would submit to anything and undergo any amount of nursing, for she had a number of people in her family to nurse her, provided she could escape an operation. With the understanding that we might fail in medicinal treatment, I undertook the case, and it was

protracted over a number of years. I am not sure but that it was three years. In that time the woman flowed frightfully, but nevertheless some of the remedies which have been suggested, and a splendid list has been named this morning, carried this woman through a protracted period during which the normal retrogressive physiological processes could take place, so that without the woman having an operation I have reason to believe that she was very much benefited.

Dr. M. J. Chapman: I do not want to criticize and would not suggest for a moment that any surgeon ever operates unnecessarily, I know them too well, but we had a little talk here yesterday on the care of the skin, and I want to say that that must not be overlooked in the care of these cases. Where you cannot operate and must do all you can in other ways, the use of the therapeutic lamp, which is now coming into use, has been of great assistance. Personally I believe that it only gets a greater amount of blood into the skin and puts the system in a state where medicines act better, but whether it is that or whether it is the benefit of the violet ray or the amber ray, whichever you use, it does help you to control hæmorrhage sooner than you can without it.

GONORRHŒA IN THE FEMALE.

D. B. JAMES, M. D., PHILADELPHIA.

Conservative statistics estimate that 55 per cent. of operations performed in the female pelvis, are the direct results of infection by the gonococcus of Neisser; that it causes 80 per cent. of all deaths from inflammatory diseases peculiar to women; that it is accountable for nearly all cases of pus tubes; and that over 75 per cent. of all suppurative inflammations in the pelvis are due to its ravages.

With these appalling figures before us it is imperative that we, as specialists or general practitioners, must accept a great responsibility when an attack of gonorrhœa presents itself for treatment.

It is far more important to be able to successfully handle these cases in the acute or semi-acute state, or before the infection has progressed upward and destructive changes have taken place in the uterus and its adnexa, than to be able to perform the various opera-

tions of salpingo-oophorectomy, or total extirpation, that are necessary in a large proportion of these cases.

Unfortunately for the individual and the reputation of the physician these cases often reach us after they have been infected higher up in the genital tract, and are in a chronic state, or that they have begun as a chronic case.

A large per cent. of these cases could, if properly treated from the beginning of the attack, be prevented from the choice of a life of semi-invalidism, or of an operation.

While it is true that some of the cases are illy treated by the physician, by far the greater number progress through neglect, ignorance or the home treatment.

Cases of gonorrhœa should be divided into two general classes. First, those that have not attempted to treat themselves or been treated, and second, those that have treated themselves or have ben treated by a physician.

I consider this division necessary to form a prognosis of the case and for therapeutic value.

In the first class I believe we can attain the best results, for the chances are in favor of the disease, under treatment, bcoming localized.

In the second class I give a guarded prognosis.

The second class should be sub-divided into two. First, the innocent or one ignorant of her condition. Second, those that have reason to suspect infection, and desire to keep their own counsel.

The symptoms of the disease may be so mild as not to inconvenience the patient, or the newly-married woman thinking the symptoms a natural sequence of the marital relations allows the disease to progress unknowingly.

The suspecting one attempts to treat herself under advice of a friend, and thereby hastens the progress, and infects herself higher up ignorantly.

In these cases of innocence, the greatest harm I believe arises through the women's best friend, which proves to be her worst enemy, the douche.

The bride, desiring not to conceive, uses it, the sufferer of a mild attack of leucorrhœa, uses it, the suspecting one uses it, and in consequence, a local infection in the majority of cases is aided in its

ravages and infects the whole genital tract, and may even enter the circulatory system or may threaten the life of the patient.

It has been estimated that 37.5 per cent. of cases are already infected about the cervix when first presenting themselves for examination.

With these figures I fully agree, but I also believe that the majority of cases begin as an acute infection about the vulva, and if allowed to remain there would not progress further.

A certain number of cases, no doubt, are infected higher up from the beginning, but this proportion I believe to be low.

Particularly do I believe this to be true in the multipara or where there is no laceration of the cervix or ectropia of the lips.

The symptoms of an acute attack of gonorrhœa, are the symptoms of an attack of vulvitus, plus urethritis, and as before stated, may be very mild or they may be very severe.

The cardinal symptoms are dysuria, burning sensation about the vulva, associated with itching and a sense of fullness. There is also a purulent discharge bathing the lips and sometimes running down the thighs.

A case presenting such symptoms should then be questioned as to what has been done in the way of treatment, and if no attempt has been made, and the parts have not been handled, the case should be treated as gonorrhœal vulvitis, provided the objective symptoms confirm the suspicion.

The objective symptoms are: localized swelling—or a general swelling—and œdema of the whole vulva extending upward and often involving the prepuce which becomes œdematous and the clitoris semi-erectile from engorgement of the erectile tissue. The whole vulva is bathed in a discharge and may show areas of denudation.

Upon carefully separating the lips there will be seen a pouting of the urethra and at either side of the meatus will be found a red punctate area. Skene's ducts. Below where the labia majora and labia minora merge, will be found two similar areas, Bartholin's glands. These four areas, are sometimes called the four gonorrhœa macules, and will persist a long time after the case has apparently cleared up.

If one is still not satisfied that the case is one of gonorrhœa, a platinum wire may collect some of the discharge that will be found in the urethra and submit it to the microscope. This latter method

I rarely consider necessary, if the other symptoms are present. If we will recall the histological anatomy of these infected areas, we will remember that they are all lined with a cylindrical epithelium.

The vulva itself is covered with the same type of epithelium as the skin, squamous.

In the vagina we again find a squamous epithelium of the same variety that covers the skin, minus the characteristics of skin, hair and hair follicles, and sweat glands.

The essentials of the treatment, then, should be to limit the infection to the areas about the vulva that are lined with the cylindrical epithelium, if the germ has not already passed the barrier formed by the squamous epithelium of the vagina.

The gonococcus may be considered a surface germ, or one that does not tend to burrow deeply, and shows a predilection for cylindrical epithelium and will not survive long the acid secretions that are found in the vagina.

As we are dealing with a foe that will conquer us unless we, from the beginning, obtain the upper hand, it is essential that we impress upon our patent the importance of co-operative treatment, and the necessity of carrying out instructions thoroughly.

As essential as it is to a thorough cleansing of the abdomen by removing all hair by shaving before performing an abdominal operation, so is it necessary to obtain cleanliness about the vulva by the same method. Shave and scrub all cases of gonorrhœal vulvitis.

If practicable these patients should be put to bed and required to remain there until the infection is controlled. Unfortunately the patient does not understand the necessity of this part of the treatment, and as she is not inconvenienced to any great extent by the disease it is hard to obtain her consent.

Again we are handicapped in the treatment of these cases that many are found in the poorer classes, that are required to work to obtain a livelihood, a class that can not take the time to be properly treated; particularly true is this in dispensary practice.

If the patient consents to go to bed she should have after the scrubbing and shaving of the vulva with hot water and soap, another scrubbing with lysol solution, 2 per cent., and a pad of gauze wrung out of the solution applied to the vulva and constantly kept wet with the solution.

As the openings of the glands are concealed by the two lips, it is

necessary that they be separated and the pad held between them to keep the solution in proximity to the infected areas.

The cleansing of the parts should be repeated daily, and a fresh solution applied.

For the first week the urethra should not be treated locally. The dysuria should be controlled by the diet and internal medication. A urinary antiseptic may be given, and in some cases there is an apparent benefit from its use.

The bowels should be kept open by the daily use of a mild laxative and an enema.

After the acute stage subsides the urethra should receive daily treatment by the application of a 10 per cent. solution of argyrol, and gradually increasing the strength up to a 25 per cent. solution. The strength is regulated by the control of the disease.

It is advisable to paint around the infected areas a 2 per cent. solution of silver nitrate.

After a week of this treatment the patient may be allowed to become an ambulatory one, and she is instructed to report daily for applications to the urethra. The treatment is continued until all symptoms subside. Unfortunately we can not estimate the duration of the disease, and must be guarded as to pronouncing a cure.

If the patient be one that can not take the bed treatment, we must content ourselves by instructing her with the principles of the treatment and the necessity of cleanliness. She should be required to thoroughly cleanse the parts with soap and water, and follow by a wash of lysol solution, after which the parts should be mopped dry and boracic acid powder applied, and repeated as often as the parts become moist.

The cleansing should be repeated before retiring, and a cloth or a pad of gauze wrung out in the lysol solution applied as previously described.

She should be instructed of the associated treatment as to diet, drink and the necessity of a daily evacuation.

If the patient be one of the second class, and has been under treatment either by herself or by a physician, who has ordered the douche treatment, or has introduced the finger into the vagina in making the examination, the probabilities are that there is an infection about the cervix, and working on that presumption, after thoroughly cleansing the external parts, we may introduce the ex-

amining finger or the speculum to complete the examination of the cervix.

The symptoms of a gonorrhœal infection of the cervix are the presence of much pus about the external os and bathing the whole cervix. Pryor considered it almost pathognomonic of gonorrhœa if pus is found in large quantities about an unwounded cervix.

There is a swelling of the whole cervix and a general redness about the os, and there is usually present a slight pouting of the lips associated with an eroded area.

Within the canal will be found a plug of mucus or muco-pus. Along with these symptoms are those of a vulvitis and urethritis.

These cases are best treated by mopping the discharge away from the cervix and cleansing the whole vagina, first with a normal salt solution followed by either a bichloride or lysol solution. The plug of mucus situated in the canal must be removed, for it is essential that we apply our medicament close to the openings of the glands. It must be recalled that the glands do not empty themselves externally, but into the canal of the cervix, and we can not expect to attack these openings with the tenacious plug of mucus sticking to their outlets.

After being satisfied that the parts are thoroughly clean a probe wrapped at the end with cotton and dipped in Churchill's tincture of iodine, swabs the whole canal, but must not be allowed to enter the uterine canal above the internal os.

Nature has again formed a barrier at this point of which we must take advantage. True, the barrier is slight, but we can not afford to ignore it and carry the cocci into the epithelium lining the uterus proper.

The cervix should be scarified or punctured, and applications of the same solution made into the wounds.

In obstinate cases I prefer to use a 5 per cent. solution of silver nitrate.

Following the application of the iodine a tampon made of a three inch gauze roller bandage, the end of which, saturated in a lysol solution, is applied loosely to the cervix. This tampon should not be allowed to remain longer than six hours, and its removal should be followed by a saline douche, followed by an antiseptic one, either bichloride (1-2000) or lysol (2 per cent.).

The douche should be repeated every four hours and the treatment daily.

As we gain control of the disease the applications can be made further apart, but as a word of warning, do not discontinue too soon the vigorous treatment, and be careful in discharging the cases too soon. Even after the eroded area about the cervix has responded to treatment it is probable that the glands within the cervix still contain some of the germs; in fact, this may be considered the cause of the repeated attacks in the individual, and the reason that cases in which we have presumably attained a cure so often infect the male.

Lasser found that the plug of mucus in the cervix contained the cocci in only 9 per cent. of cases, but found within the cervix the cocci in 49 per cent.

After persistent treatment and the shreds, as it were, do not clear up, it is advisable to remove the infected glands by performing an operation of amputation of the cervix.

In these cases I am careful not to curette the uterus for fear of carrying some of the latent germs on the end of the instrument and depositing them in the uterus higher up, and often close to the tubal opening.

The gonococcus attacks the vagina in only 15 per cent. of cases, and is not as frequent a complication as is supposed.

The treatment in these cases is to introduce a speculum, preferably a cylindrical one, so as to roll out the folds of the vagina, and mop dry the cervix and the vaginal walls.

A solution of silver nitrate, 2 to 4 per cent., is then poured into the speculum and allowed to gradually bathe the whole vaginal wall as the speculum is withdrawn.

The speculum is then reintroduced and the vagina firmly packed with strips of iodoform gauze (10 per cent.). This packing should be allowed to remain for twenty-four hours, then removed and the patient given a douche of bichloride or lysol.

It is seldom that there is any necessity to reapply the gauze, and the patient is instructed to take the vaginal douches three times daily until the discharge is controlled.

SUMMARY.

(1) Divide cases of gonorrhœa in the female into those that have and those that have not been under treatment.

(2) Consider those that have not been treated or handled as probably only cases of vulvitis and urethritis.

(3) Consider those that have been treated or handled as probably infected higher up.

(4) Do not introduce the finger or any instrument into the vagina in cases of vulvitis and urethritis.

(5) Do not allow the use of the douche in acute cases of vulvitis and urethritis.

(6) The gonococcus shows a predilection for mucous membranes lined with cylindrical epithelium.

(7) The vagina being lined with a squamous epithelium is rarely attacked primarily, but is most frequently secondary to infection about the cervix.

(8) Remove the mucous plug within the cervical canal before attempting to apply any local treatment to the cervix and the cervical glands.

(9) Remember that the gonococcus is found within the cervical glands, even after it can not be found in the cervical canal.

(10) Be exceedingly guarded in pronouncing a cure.

DISCUSSION.

Dr. B. F. Betts: The importance of the subject I think demands some discussion. I was very much pleased to have it brought before us for consideration. When we take into consideration the fact that so much suffering is induced and so many lives sacrificed from this infection, its importance can scarcely be overestimated. I agree with the essayist in the thoroughnes with which he attacks the acute case, but I disagree a little with the methods advised. In the first place, I agree with the statement that the hirsute appendages of the vulva should always be removed in the treatment of these cases, so as to secure extra cleanliness, but I cannot endorse the sentiment that we ought not to approach the cervical portion of the reproductive organs in acute cases, and carry out the same thorough curative measures in that direction that we institute in the treatment of the vulvar inflammation and infection. In fact, I do not believe that we ought to consider this disease as primarily an infection of the urinary tract. I think that is a great mistake. In the male, of course, we cannot consider it in any other light, but the difference in

the anatomy in the female should direct our attention to the frequency with which the reproductive organs are affected. There is no reason why the penile organ does not carry infection to the cervix in an impure copulation as readily as it carries infection to the urethra. The statement is made that over 45 per cent. of the cases of vulvar gonorrhœa are attended with gonorrhœal infection of the cervix. I contend that there are a great many cases of gonorrhœal infection of the cervix without gonorrhœal infection primarily of the external organs of generation, and these cases of latent gonorrhœa, the second variety mentioned by the essayist or chronic gonorrhœa, those that have been treated and the latent variety would make the third variety. These cases of latent gonorrhœa are, of course, cases in which the cervix, the cervical canal, the endometrium and the Fallopian tubes become infected without any very palpable evidence of external infection. Then, again, we know very well that if the bladder does become infected it has been conclusively proven that the gonococci can traverse, and do traverse, the walls of the bladder into neighboring structures, so as to produce parametritis. If they can traverse the tissues in that direction they can traverse other structures in the neighborhood of the vagina and the cavity of the uterus and the Fallopian tubes, so that we must aim to remove those gonococci from all portions of both the reproductive organs and the urinary organs. There is more reason for us to aim our treatment towards the relief of the affection in the reproductive organs than in the urethra, because the urethra has for itself a drainage, an irrigation, so to speak, from the passage of the urine, which tends to prevent the progress of the disease into the bladder, but in the cervical portion of the uterus there is often none or very little drainage, and, if the patient keeps the recumbent position, as recommended in this paper, and does not resort to douches, has not the privilege of having douches administered, and has not the privilege of getting up and moving about so as to effect a more complete drainage from the cavity of the uterus and vagina, these germs, I think, will pass more readily and freely into the cavity of the uterus and affect the Fallopian tubes in consequence of this method of treatment. I want to be as considerate as possible, because I believe that everyone is entitled to an opinion of his own, but I feel that the importance of this subject demands that we go direct into the vagina with out antiseptic methods, cleanse it thoroughly under an anæs-

thetic, cleanse the cervix thoroughly whilst the patient is under the influence of the anæsthetic, and dilate the cervix thoroughly.

The statement is made that the introduction of an instrument into the cervix would be very likely to carry germs into the cavity of the uterus. If the cervix is first thoroughly irrigated and swabbed off and cleansed and then grasp it cautiously so as to hold it firmly whilst the divulsion is being effected, in order that no tear may ensue from the divulsion, we can dilate the cervix, clean it out thoroughly, curette the endometrium, wash that off thoroughly, and thus, I think, save the patient the great danger of uterine infection, which, after all, is the point we must take into consideration as of paramount importance. Therefore, in a few words, I should outline the course of treatment that I invariably pursue in the care of acute cases. Treat the case as a surgical case right away. Put her under the influence of an anæsthetic. Clean the external parts thoroughly and the vaginal walls thoroughly. Dilate the cervix and cleanse it. Curette the cavity of the uterus and the endometrium and cleanse that. Then pack the vagina gently so as to distend the folds of the mucous membrane, and leave this antiseptic packing in for about twenty-four hours. Then remove it, have the patient get up and get about as soon as possible, and douche the vaginal canal very frequently.

Dr. J. E. James, Sr.: I am thoroughly in accord with the paper and not so much in accord with my friend, Dr. Betts. The gonorrhœa of the female primarily runs to its natural seat, the urethra. The drain from the urethra comes against the vulva. By its persistence the vulva becomes seriously affected. The vaginal canal is one that is closed naturally, and like all canals, it folds together. Unless something is introduced to open it, its natural position is folded. It has a natural door. Nature has provided that against external infection, and it has provided the cervix first with a smaller os than the vulva, and with another os inside to prevent infection from without. Besides that it has lined the canal of the cervix with mucous membrane that resists your ordinary local applications, unless you seriously or thoroughly remove it. Applications inside the cervical canal amount to nothing. Nature has provided against this kind of infection. I take exception to Dr. Betts' method in treating an acute case. When you see it first in the average case that comes to you Dr. Betts is right, because it is a disease that is treated in

secret or not at all, as a rule, and nobody comes until she feels she cannot help it. The consequence is the patient's whole vaginal canal and cervix are infected in the average case as you get it, before she goes to a doctor at all. The paper says that physicians ought to be taught to prevent that infection. If you can see the primary case before she has introduced a syringe to push the parts open so that the pus can go into it, you have a chance of curing it in the urethra and vulva, and not having the deeper infection at all. If you are suspicious that she has or that somebody else has with the finger or the nozzle of the douche made an examination and infected it, then examine the other, but begin with what you ought to do in the acute condition. Cleanse every particle of the outlet surgically before you go above it. Cleanse the vulva, shave the hair off, and wash and cleanse the vulva antiseptically as far as it opens naturally. Then cleanse the urethra and then cleanse the vagina from the bottom up. Do not pass the line of cleansing with the finger or speculum or any other instrument until you cleanse it. That is the only way you can test them, because the disease does not readily travel up the vagina. Deeper infection is secondary and travels slowly. The vaginal canal is not nearly so subject to the action of the gonococcus as is the urethra. Hence you have a chance, if you treat that way, to prevent cervical involvement. If it does go above as Dr. Betts has outlined, what you have to do is to secure absolute and thorough surgical cleanliness all the way up the vagina and cervical canal before you pass a sound or dilator through it. That is a point I make particularly, cleansing the cervical canal before I pass dilators and dilate at all. Give the cervix chance to drain freely and curette. You cannot repeat curetting very frequently. Pack the cervix and keep the infection from going higher. If there is much discharge forms outside of the cervix I would remove the pack once in twenty-four hours, or once in twelve hours, but prevent the infection from going higher. In the great majority of cases we get you know their seriousness, how large a proportion of our abdominal sections of inflammatory origin are of gonorrhœal origin. If they apparently get rid of the discharge quickly they stop treating and think they are cured. Infection goes on quietly above until it affects the tube, and that you cannot wash out. The pus is there. It is true nature gets out the gonococci but it leaves the pus, and that you cannot take out. I

approve the paper because I think it will set physicians to thinking and to beginning its early treatment from a clean surgical standpoint. That is what it needs. It is nothing but a surgical condition from the beginning. Afterwards it becomes septic, more or less, and infects the system through sepsis rather than through the action of the gonococci. You do not find those in the pus after a short time. They are killed. No matter what may be their origin, the treatment for the later effects is the same. It is true the bladder may be affected. All physicians inspect the urethra and go for that, but they do not give proper attention to the treatment of the deeper invasions of the disease. The right thing is early treatment. When it gets beyond that we all know what to do, give frequent vaginal douches. A second curettement may be required in a week or two.

Dr. R. E. Tomlin: The statements made by Dr. J. E. James and Dr. Betts do not differ as much in substance as they appear to on the surface. Experience of men differ in accordance with the class or variety or number of cases seen and treated. At the Bellevue-Stratford last evening Dr. Millie J. Chapman, Dr. T. J. Gramm and the speaker met after the banquet, and the subject of the paper written by Dr. D. B. James was introduced by Dr. Chapman. She made the remark that if the facts stated in the paper were true, and they must be admitted, the responsibility of the doctor was doubly great. That it was by no means limited to the so-called professional side of it, but the consideration of it in all its serious aspects should be clearly and definitely impressed upon every patient so diseased. The fact that the gonococci may be dormant in the urethra and adjacent parts for long periods and then suddenly and violently infect innocent persons, the consequence of which, so often resulting seriously, make it imperative that we not only make use of every intelligent means to eradicate all evidences of the infection, but that we acquaint the patients with the responsibility which rests upon them. It is not possible in the present state of affairs to control these patients, either in hospital or private practice, as should be done, for reasons that readily suggest themselves. Recent experience in two cases occurring in married men will illustrate, in part, what is meant. A business man went to a neighboring city to construct some machinery. While there he indulged in his sensual nature, and in less than a week had an acute urethritis. When he consulted me he was given strict orders to conduct himself very

discretely with his wife, as she was four months' pregnant. For several weeks he obeyed, then fearing she would discover his condition, indulged without any protection, with the result that a mild vulvitus and mild urethritis, but a very severe vaginitis, endocervicitis followed rapidly in spite of active local treatment, and she aborted about the fifth month. Following this the specific infection travelled to the tubes and abscess resulted, necessitating their removal through an abdominal section. Another case where a business man visiting New York City spent the evening in one of "those infamous resorts." In five days he was surprised to find he had a highly inflamed organ. He was duly cautioned, and avoided his wife for nearly a month. She was violently infected in the vagina and cervix, but very slightly so in urethra or about vulva. In the experience of the writer (and he was in the G. U. department for a long time) the female urethra and even the vulva have not been as markedly affected as stated by some of those who have previously spoken. The vagina may be a closed canal (sometime in life in some females), but in the opinion of the speaker most men when aproaching women enter the vagina directly, rather than parading about the urethra or vulva. Therefore, the likelihood of vaginitis and endocervicitis, etc., are more likely than some seem willing to admit. Noeggerath makes the statement that it is his belief that of every one hundred wives who marry husbands who have previously had gonorrhœa, scarcely ten remain healthy; the rest suffer from it or some other diseases that follow in the wake of it. Of the ten that are spared we can positively affirm that in some of them, through some accidental cause, the hidden mischief will sooner or later manifest itself. Many other observers make similar statements. Consequently it is not possible to say that a case of gonorrhœa is absolutely cured and the person can indulge at liberty. No less authority than Prof. Webster Edgerly, one of our ablest writers and observers, has made the startling statement that 75 per cent. of young men at 21 and 25, 90 per cent. have indulged in illicit intercourse, and that 75 per cent. of these have had some venereal disease, principally gonorrhœa. If this is a fact, and it cannot be successfully refuted, for the facts are there, and there is no authority in the world who has better means at his disposal for knowing these facts than he has. Consequently it becomes imperative that the thought expressed by Dr. Chapman last evening be carried out conscientiously by all who treat these cases.

Q. What is the nature of the douches recommended by Dr. Betts? Are they normal salt solution, plain water, or what?

Dr. B. F. Betts: Any positive antiseptic solution, but preferably bichloride of mercury, 1 to 4,000, inasmuch as that has astringent effect on the mucous membrane as well as a thoroughly germicidal effect.

Dr. N. F. Lane: It seems to me that Dr. James's paper rests on the fact that he wishes us to individualize our cases. He divides them into two divisions, those which are recent, acute and have not been examined, who have not been using the syringe themselves, and those who have been examined or who had been using a syringe. We all know that sometimes the urethra and vulva are infected without infection of the cervix. We also know that the cervix is often infected, and to my mind more frequently than the urethra. When a case comes to us for treatment we should examine the external organs first, of course. If we find that they are infected we want to be very careful about going into the vagina, but usually there is not much difficulty in determining an infection of the cervix from an external examination of the vagina or an examination of the vagina low down, without scarcely introducing your finger or anything into the vagina. If, when you separate the orifice of the vagina you find it bathed in pus that is coming down from above you can rest assured that there is infection above, and that it is probably in the cervix. My practice is mostly with douches, because it has been my experience that most of the cases we get are infected above. I would not use them if I were not quite sure that there was an infection of the cervix. The douche I usually use is permanaganate of potash. In regard to dilating the cervix in these cases where the infection has not gone above the cervix I feel a little skeptical. I am afraid to do it. When you consider the anatomy of the cervical canal and the nature of its glands you can readily see that theoretically, at least, it is impossible to get to the bottom of them with the curette, so that one curettement, it seems to me, will not thoroughly cleanse the cervix, and I am always afraid I will do injury to the cases by opening fresh surfaces for infection by dilating the cervical canal. Of course, that is theory. I do not do it, so that Dr. Betts's opinion is worth a good many of mine because he had had much practical experience, but that is the way I feel about it.

REPORT OF THE

SECTION OF PÆDOLOGY.

The Diagnosis of Croupous Pneumonia in Children, by E. R. Snader, M. D.

THE DIAGNOSIS OF CROUPOUS PNEUMONIA IN CHILDREN.

EDWARD R. SNADER, M. D., PHILADELPHIA.

It is a somewhat notorious fact that many penumonias of the croupous type in children go unrecognized, or are discovered very late in the affection, when the patient is either dying or on the road to recovery. There are three reasons why this state of affairs exists in regard to this form of lung involvement. The first of these reasons is, perhaps, that the physician does not think of the possible presence of the disease, for of all the maladies of childhood there is none that presents such a diversity of symptomatology and in which the toxæmia of the pneumonia assumes the aspect of some other disorder and so closely counterfeits the simulated disorder that the possibility of pneumonia is not suggested, or, if suspected, is only momentarily entertained. The first and most prominent reason for the non-recognition of croupous pneumonia is that it is not thought of. The second reason is that too many physicians do not attempt to examine a child by means of the methods of physical diagnosis. The third reason is that the physical examination of a child's chest requires an entirely different technique from that employed in the investigation of the adult chest, and it is the failure to appreciate this radical difference as well as that the diagnostic data themselves are sometimes totally unlike the physical phenomena found in an adult suffering from the same disease that leads to failure to recognize the affection when it is really present.

It is a rarity to come across a "straight" case of croupous pneu-

monia in a child. There is room for differential diagnosis in ninety-five per cent. of cases so far as my observation goes. Pneumonia of the type I am now considering simulates *meningitis*, cerebro-spinal meningitis, typhoid fever, an oncoming exanthem, *gastro-enterits*, *appendicitis*, bronchitis, gastritis, *intestinal auto-toxæmia*, and if there be such a thing, simple continued fever. I am speaking now particularly of the cases that occur alone, that is, not complicating some other malady, for pneumonia will, indeed, be found a very frequent complication of almost all the acute diseases, and even in the subacute and chronic ones, and unless sought for, is oftener overlooked than when it occurs as an uncomplicated malady. It must be taken into account that all the essential symptomatic phenomena of the disease may be lacking. The pulse may not be greatly altered, and there may seem nothing whatever suspicious in the respiratory rate, and very frequently, indeed, there is no cough, at least not until very late in the progress of the case, and I have seen cases pass through the entire course without so much as an attempt to clear the throat, much less cough. Herpes on the lips and one red cheek, outside of pulse or respiratory disturbances, which suggest lung trouble, suggest its possible presence. Cough always demands an investigation of the chest to locate in or exclude the thorax as its cause. Rapid respiration, no matter what affection the child is suffering from should at once lead to an investigation of the lungs, the heart, the abdomen, the brain, the pleura. Of all suggestive symptoms, perhaps, is fever, not accounted for by notable symptoms pointing to other organs, but even if other organs are supposed to be implicated, fever should always lead to an examination of the thorax. Vomiting is often a prominent initial symptom. Pleural pain when present is usually referred to the epigastrium, or even lower down, and these pleural pains in childhood, while sometimes they may have the same modalities and aggravations as a pleuritic pain in adults, seem, in the sypmtomatology of the little ones, to hurt all the time, whether they are breathing or not. When the pain is especially severe during respiration, it leads to great irregularity in the performance of the respiratory acts, and to the typical text-book "grunting," even if no sharp outcry be noted. Many cases in childhood are absolutely devoid of pain, however. While the peculiar pulse-respiration ratio so often noted in adults is occasionally found in children, it is almost invariably noted in those old enough to talk and

give some sort of an idea of how they feel. The best way to be sure to recognize croupous pnuemonia in the very young is to regard it, not as an inflammation of the lung, but as general febrile process due to infection, and practically liable on that account to furnish a very marked symptomatology, just as do other infections in both children and adults. Suspect the possible presence of pneumonia of the croupous type in all acute and chronic maladies in the young, and make it your business to exclude the disease by the absence of its signs.

To those who attempt to make their diagnosis of pneumonia in children without the aid of a physicial examination, I have nothing to say, for such diagnoses are worse than guessing, it amounts to criminal negligence. Mere rapid respiration, and fever, and cough, if they happen to be present, are not sufficient to base a diagnosis upon, for the case may be one of bronchitis, of broncho-pneumonia, of phthisis, of pleurisy with effusion, of empyema, of subdiaphragmatic abscess, of endocarditis, of myocarditis, of pericardial effusion, of simple tracheitis, of pharyngitis, of tonsilitis, of diphtheria, of gastro-intestinal disease, of, in fact, almost any manner of disease that can affect the respiration, from meningitis to typhoid fever, or any affection that by virtue of accompanying fever, increases the respiratory rate; and any one who knows anything at all about diseases of children is well aware that anything from "worms" to a post-nasal catarrh and adenoids, can seriously alter the respiratory rate. An intelligent, tenable diagnosis of pneumonia of the type we are considering can only be made by a study of the physical signs found in the chest, and the disease can only be excluded by the absence of these signs and a logical accounting for the symptoms by the discovery of disease affecting some other organ than the lungs, which can justly be held accountable for the production of the clinical picture.

Only a word or two to those who examine the chest. Inspection may occasionally, by showing exceedingly rapid breathing, or grunting respiration or painful respiration, furnish important evidence favoring the diagnosis of pneumonia. Sometimes respiration is not at all affected. It depends much upon the extent of the lesion, upon the height of the fever, upon the degree of toxæmia, upon the tolerance of the child, and upon the stage of the affection present in the chest, and also somewhat upon the age of the little patient, and upon

whether there is a co-existing bronchitis (and, by the way, it is a rarity to find bronchitis accompany croupous pneumonia, at least in the early stages). You may note that one part of the chest does not move as freely as a corresponding portion on the opposite side, or over one lobe on one side compared with the other. Palpation, while the child is crying, or in older children while talking, voluntarily or otherwise, betrays alterations in the vocal fremitus that will point immediately to the part consolidated by exudate, if that stage in the malady has been reached. Sometimes a lobe may be beautifully mapped out by fremitic alterations alone. (Don't think that a child has no vocal fremitus, for it has, and the day-old baby will betray that fact to your examining hand, and fremitus has, so far as I have been able to discover, exactly the same difference in intensity in different regions as are found in the adolescent or adult chest.) If I consider vocal phenomena necessary to the diagnosis, I can generally get enough voice for my purpose, and I don't think you will have any difficulty in that line. Occasionally palpation betrays the presence of rales, either dry or moist, easily appreciable to gentle touch. This, however, is rare, unless there be co-existing bronchitis, or a late stage of the pneumonia has been reached. The diagnosis should have been made long before this phase of the affection has been reached.

In percussion, however, we have a most important method of examining the child's chest. The chest should be bare, if possible. The stroke of the percussing finger must be exceedingly light, so light that it will almost appear to bystanders that you are playing with the child, and the pressure of the pleximeter finger must also be only enough to barely condense the tissues. Indeed, sometimes this pleximeter finger will tell you more than the sounds elicited from the chest, for a slight consolidation will immediately make you appreciate a sense of resistance, and I do not know but that skilled percussors unconsciously rely as much upon this sense of resistance in diagnosing consolidation as they do upon tone modifications. Certain it is that this sense of resistance in a child's chest is a most valuable sign. The percussion strokes should be exceedingly light and not too often repeated, and comparison should be made with the opposite side and with the immediate neighborhood of the point selected for percussion. The philosophy of such delicate percussion is that the child's lungs are, relatively to the size of the thorax, very

small, and the ribs and cartilages are very yielding. If you use strong strokes you are apt, and, indeed, can hardly avoid, deriving the resonance from the whole of the one side of the child's chest you are examining, and by producing considerable volume of sound, render absolutely obscure those sound elements that are to be derived from a consolidated area. Do not expect to find marked dullness on percussion. You will rarely do that. If that sort of note is readily elicited, ou had better think right quickly of fluid in the chest, either alone or complicating a pneumonia. You may elicit an altogether purely typical tympanitic note over a consolidated area in a child's chest. This most frequently happens over the upper lobes, where you may, indeed, occasionally make out the cracked pot or the amphoric notes, and yet be simply dealing with consolidation. In point of fact, you can elicit a tympanitic, or a cracked metal, or an amphoric percussion note in a perfectly normal child's chest by simply striking the chest walls too hard. (You drive the air by the force of your blow out into the trachea and bronchi, and thus produce the sound; this is possible owing to the yielding cartilages.) The greatest mistake made by most men examining the chest of a child is to expect to find a markedly dull sound, and not finding that sort of percussion note, ruling out consolidation, at least so far as that state of the lung is discoverable by percussion. I had almost said you can have "any old kind" of a percussion note in pneumonia in a child, and this is practically true. If you find a big area in which the percussion note is distinctively different from a corresponding area on the opposite of the chest (keeping in mind always, of course, the normal difference between the two sides), and you may find that that difference in the percussion sound is one of the confirmatory signs of a gross consolidation, and most gross consolidations, if not due to pleural effusion, are due to pneumonia of the croupous type in acute cases. Dulness, when found, as I have tried to intimate, is simply a little lessening of the normal intensity of sound, a little lessening of the vesicular quality than you would ordinarily find, and an elevation of pitch. Remember that over the upper lobes especially you may obtain any of the varieties of tympany instead of dulness In other words, a perfectly clear, unmuffled note does not mean that you may not have consolidated lobe beneath. Tympanitic notes are often elicited over the lower lobes, too, when the intestines are distended with gas especially, and also at other

times without explainable reason. (Some say relaxation of lung.)

Auscultation, however, is the chief means of recognizing pneumonia, the percussion note serving as confirmatory evidence. Do not expect to find the crepitant rale in the first stage, as you do in adults. In point of fact, you may not find that particular rale at any time from start to finish. Whatever the modification that may be found in the respiratory murmur caused by the pneumonic infiltration or actual consolidation, you may or may not find rales of any description. The breathing, when heard, may be as "dry as punk," and I think it is at this point that many examiners fall down. They fully expect to find rales of some sort. There is sometimes noted a little "fuzziness," if you please, and you can translate that into a rale if you want to, but it certainly does not fit into the description of any of the classical rales we find in adults. You frequently, but not always, find rales when the consolidating process is breaking up, after the crisis; but I have noted instances in which I could not find rales of any description at any stage of the disease. Possibly they may have been present when I was not examining the chest. I simply give the experience for what it is worth. We have several modifications in the respiratory murmur, and these modifications range from absence of sounds to diminution of sound, to broncho-vesicular respiration, to pure bronchial respiration. Any of these modifications found over a considerable area of the chest, and not due to fluid, or to a gross pneumonia of the bronchial type (by the way, with a gross consolidation due to a broncho-pneumonia, you generally have far graver local as well as systemic symptoms, than with the croupous variety), or to phthisis (which lacks the acuteness and the time element of a lobar pneumonia), and you are almost certain, if the percussion note corresponds, and the child is ill, to have sufficient physical signs to diagnose croupous pneumonia. Do not expect to find pure bronchial breathing often, for you will be disappointed, and do not expect the consolidation to be strictly limited to a lobe, as in some adults. Expect, however, to find a big area of lung involved. The greater the consolidation, as a rule, the easier it is to try to explain the breathing as a possible normality, and here is another place in the diagnosis of pneumonia where some practitioners fall down, and this mental tendency must be guarded against and the fact of the morbidity of the suspected respiration be fully established. Here is where the percussion note comes in with its

confirmatory story. Rales, if present, are still stronger in proof of lesion.

Now, when are these physical signs evident? Early or late? That depends somewhat upon the stage of the disease, and more, I think, upon the skill of the examiner. Even when you first see the child, which is sometimes after a convulsion, or an attack of vomiting, or possibly a chill (rare), or a sudden elevation of temperature, if you look for signs you may find the "fuzzing" of the respiratory area about to be affected (the equivalent of the crepitant rale in the adult). This may disappear, and give rise possibly by your next visit to very decided modifications in the respiratory murmur. Consolidation is occasionally complete within twenty-four hours, and in some cases it is never fully complete throughout the disease; that is, the respiratory murmur does not betray absolute consolidation. Occasionally the signs may be delayed until near crisis, but if you are on the lookout you have probably made your diagnosis long before the lung has been fully consolidated, possibly by the slight change in the percussion note, a few localized rales, obscurity of the murmur over a large area, taken in connection with the manner of onset of the disease, and the exclusion of other causes for the child's illness. Frequent examinations will prevent many of those cases not recognized until after crisis. I have never seen a case of "central" croupous pneumonia in a child.

The rules for the detection of croupous pneumonia are: To suspect it in any acute disease of childhood, at any season of the year; suspect it in any of the exanthems, in pertussis, in nephritis, in tonsillitis, in typhoid, in bronchitis. Watch the percussion note and the respiratory murmur for gross modifications. Do not expect the typical physical signs of an adult. Make frequent examinations. Interpret rales if present. Make your diagnosis without them if everything else agrees and does not contradict such a diagnosis. Remember that the diagnosis is only made by correlating the physical signs with symptoms, and never with certainty by symptoms alone, and only seldom by signs alone.

It is rare that the aid of the microscope is resorted to in these cases for the purpose of making a diagnosis first, because micro-organisms, if found, would need confirmation by the discovery of the physical signs, and, if these are found, the case is already sufficiently well diagnosed. Sputum may be procured, however, if de-

sirable, by having the attendant entangle some of the sputum on a handkerchief after an attack of coughing, removing it from the pharynx; or, inasmuch as the children swallow their sputa, passing a catheter into the stomach and withdrawing the catheter in such a way as to retain as much as possible of what has flown into it while in the stomach, and placing this catheter in a sterile bottle, then submitting it to the usual microscopic examination, differentiating, however, all stomach findings from those of the sputum which you may or may not have caught. I leave it to you, without comment, to like or dislike that method of getting at sputa in children.

I do not mean to infer by anything I have said that the diagnosis of croupous pneumonia in children is always easy, for that idea would be far from the truth. What I have endeavored to do is simply to point out why the diagnosis is not made, and to assert that it can be made in a very large proportion of cases with more than a reasonable degree of certainty if its presence is suspected, and I have insisted that the only way to have this possibly pregnant suspicion ready on all occasions is to suspect all cases of acute disease in childhood as having pneumonia until it it is proven otherwise. This remark also applies to any chronic malady that is apparently not pursuing its normal course, especially so if there are exacerbations of fever (if the disease be a febrile one), and where there are disturbances in the respiratory rate, or where brain symptoms become prominent, or where vomiting is found, and where there is pain in the abdomen.

Perhaps it would be wise to give very briefly, indeed, a few cases from actual clinical practice, illustrating the difficulty of diagnosis (and consequently of giving a reasonably certain prognosis, and of giving proper direction to therapeutics).

Case 1. A bright, intelligent lad of ten years, was brought into the Children's Homœopathic Hospital, of Philadelphia, during one of my terms of service there, and placed on the surgical side to be operated upon for appendicitis, and I was asked to see him simply to determine his physical status before operating. He had been ill two days with fever, pain in the abdomen, and more or less constant vomiting. I found the abdomen tympanitic, very tender over McBurney's point, with slight rigidity over the right rectus. These local signs, together with the constipation and the vomiting, seemed simply sufficient to establish the diagnosis of appendicitis. He had

been brought to the hospital because the twenty-four limit had been passed, and, in fact, he was growing worse with pain and abdominal distention, from hour to hour. His respiratory rate seemed too rapid for even the amount of abdominal distention and the amount of fever, and I examined his lungs. I found a well-marked lobar pneumonia of the right side, and with this knowledge giving greater keenness to my observations, I thought I noticed an accession of pain with respiratory movements. My diagnosis was: Croupous pneumonia. My recommendation, no operation. My prediction that he would crisis in three days, and that the "appendicitis" would disappear with the crisis. The diagnosis, prognosis and prediction were all disbelieved by the residents; but I "had been there before," and felt certain of my ground. The boy had his crisis in three days, the tympany and pain in the abdomen were gone like magic, and the boy made a speedy recovery.

Was this a case of appendicitis complicated by croupous pneumonia (a by no means infrequent finding, for croupous pneumonia is a complication of many acute and chronic diseases of the most diverse symptomatology and pathology)? Was the appendicitis "catarrhal?" Was the appendicitis "pneumonococcic? Pray do not think this latter proposition absurd. There is reasonable ground for this belief. I have seen any number of cases of belly pain in the acute affections of children that were certainly not appendicular colic and just as certainly not appendicitis, but simply the refcrence of the pain to the abdomen so often noted by pædiatrists in the pulmonic affections of the young, for it is almost axiomatic that a child with a thoracic affection with pain in its symptomatology will place that pain, not in the chest, but in the abdomen. The case I have used for a text, however, was not of that class. Here I had all the classical signs of appendicitis, and, personally, I believe I had a case of appendicitis. I also have the temerity to believe that the appendicitis was, in this particular case (and some others of the same type that I recall, but will not cite), not of a so-called catarrhal type, but an actual pneumococcic appendicitis. Otherwise why the quick subsidence, the almost instant recovery? Pneumonia is an infection. It is known that it attacks the brain, membranes, the pleural membranes, the endocardial membrane, the pericardial membrane, the kidney structure, the gall bladder structure, and pray, why not the appendix? In view of the critical ending in some of these cases, and

the other data I have suggested, this seems a reasonable proposition to me. I do believe, however, that all cases of appendicitis accompanying or complicating lobar pneumonia are not of the pneumococcic type by any manner of means. Here is food for thought, anyway.

Case 2. Was a well-nourished boy of four, seen in New York State, because of an unequivocally unfavorable prognosis given by the attending physicians and two consultants from New York. The boy had been taken suddenly with a convulsion, followed by persistent vomiting, retraction of the head, strabismus, high temperature, rapid pulse. The diagnosis concurred in by all the attendants had been meningitis, the prognosis bad, the type of meningitis not being decided upon. The respirations corresponded with the pulse rate, there had not been the shadow of a cough, but there were a few herpes on the lips, and I thought one cheek redder than the other (a symptom, by the way, not infrequently noted in meningitis as well as in pneumonia, enteric troubles and vaso-motor disorders), but it was the one that made me make a careful examination of the chest. Here I found all the percussion and respiratory evidences of an upper left lobar pneumonia, but not even the semblance of a rale, and I found that the head retraction was more apparent than real, and while offering some resistance when manipulated, did not present the extent of rigidity one would expect to find with the semi-stupor and strabismus present. My diagnosis was croupous pneumonia with cerbral symptoms. Prognosis favorable, inasmuch as up to that time I had not personally lost a case of croupous pneumonia in a child. The diagnosis, as well as prognosis, was received with incredulity; but three days later I received a telegram to the effect that crisis had occurred, and that all the brain phenomena had disappeared. The boy made a speedy and uneventful recovery. No one suspected pneumonia in this case, and frankly, I did not suspect it myself when I first began my examination of the child.

It is a well known clinical fact, as yet without definitely settled cause, that upper lobed pneumonias in the young frequently give rise to cerebral symptoms as well as to high temperatue, and I have often wondered whether these "brain" cases of pneumonia were not really pneumococcic meningitis, ending by crisis, just as the lung lesion ends its severe course. Whether these cases, and they are not few in practice, are really pneumococcic in origin, or reflex, or due to the

fever, or due to the toxæmia, or to the consequent circulatory disturbances I have not yet been able to settle in my own mind to my satisfaction. I have, fortunately or unfortunately, never been able to secure an autopsy in any of these cases, for it has been my experience that all the cases of croupous pneumonia in which cerebral symptoms simulating meningitis appeared early in the progress of the pneumonia have all recovered. This statement is, however, not true of the meningeal symptoms or meningitis appearing late in the disease, for while I have seen recoveries even in late appearing "pneumococcic meningitis," as I like to term them, I have also had fatalities. The possible significance of cerebral symptoms as representing an actual meningitis in the course of pneumonia has not, to my mind, received the attention from the profession which its importance demands. In some of these cases, if I was not dealing with an actual meningitis, I do not know otherwise how to class them, for "pneumonia with cerebral symptoms" is not satisfying, and I do not see any good reason for not thinking we often actually deal with meningitis in these cases, and that this view is not at all rendered less likely on account of the frequent recoveries. We are having our eyes opened in regard to prognosis in other directions, why not in this? We do not know that the pneumonia poison, be it coccic or not, asumes all the phases, clinically, of other infections, and can and does attack or give rise to severe symptoms in other organs than the lungs. We know, too, now that "pneumonia" is a general systemic affection with local manifestations in the lungs.

Case 3. Was an interesting one, in which some time elapsed before we could come to a conclusion as to whether we had "the whole show" or not. I was called in counsel to see a little girl about eight years old, who, three days before, had started in suddenly with severe pain in the abdomen. The diagnosis was appendicitis, and I was called to settle the question of immediate operation, for she was going down hill rapidly. She had, in addition to decided tympanitis, all the classical signs of appendicitis, with, if my recollection serves me rightly, an abdomen that made me think strongly of a general peritonitis. At any rate I was in doubt as to whether fluid was present in the belly or not. The temperature was up about 104° F., and the heart rate 40, and having somewhat the characters of dicrotism. Her face was pinched, and she had a general appearance, which, together with the tongue and dicrotic pulse, that suggested to me the

possible presence of typhoid fever. It was too early in the prognosis of the case to gain any information from the Widal test, and meanwhile, in order to get the child's general status before putting her on the operating table, I examined the heart and lungs. In the upper left lobe I found the percussion and auscultatory signs of a croupous pneumonia but no rales. The attending physician, himself a skillful examiner, doubted the diagnosis of pneumonia. I, however, advised against immediate operation, believing the child would die upon the table. Next day I was again summoned, the doctor feeling that the child would surely die if she was not operated, and I felt when I saw her, that she would surely die of she was treated surgically. At this time the pneumonic signs were still dubious to the attendant, and were, if anything, less pronounced than at my first visit, but she looked more septic, had the "abdominal facies," and her heart was more rapid. She certainly looked a picture of sepsis. The local symptoms of appendicitis were even more pronounced than before. I again advised waiting until after the pneumonia crisised. Besides I still entertained my suspicion of typhoid fever complicating both the pneumonia and the appendicitis. Two days after my last visit the temperature fell by crisis, the abdominal pain disappeared, the whole aspect of the child changed for the better, and she appeared to be on the road to rapid recovery when her temperature began to rise again, and two days later rose spots appeared upon the abdomen and chest, the spleen became larger, tympanitis reappeared, her state became typhoid, and she passed through a typical attack of enteric fever. There was now only the ordinary abdominal tenderness of typhoid fever, the appendicular signs having disappeared. The patient recovered.

Some interesting and unfortunately unanswerable inquiries naturally arise concerning the unusual phenomena presented by this little patient. There is nothing unusual, however, about the latency of the pneumonia. That is frequent enough in both adults and children I think I have sufficiently emphasized that the diagnosis is dependent upon the presence of physical signs, and that the diagnosis of pneumonia of the lobar type cannot be made with certainty without them. Nor is the fact that a typhoid should be complicated with a pneumonia strange. We have pneumonias of both the catarrhal and croupous type in any stage of enteric fever. Neither is it strange that an appendicitis should be complicated by a pneumonia. This

was not, in my judgment, simply a case of pneumonia with the pain of that affection showing itself in the abdomen. If that abdominal complex of symptoms was not an appendicitis I certainly would not venture an opinion as to what else it was. The appendicitis may have been an ordinary "catarrhal" type; it may have been pneumococcic; it may have been due to Eberth's bacillus. There is really no good reason to believe that Eberth's bacillus could not attack the appendix just as well as it affects Peyer's glands, for it affects, directly or indirectly, every tissue in the body. There is such a thing, too, as an Eberth bacillus pneumonia. That point has been semi-occasionally demonstrated by bacteriologists. It is rare, however. I think the bacilli were seen once or twice by Dr. Sappington, in Hahnemann Hospital, in cases under the care of Professor Goodno. If I am correctly informed these cases bore the clinical earmarks of croupous pneumonia of the ordinary type complicating infections. But personally I do not think the little evidence we have makes the diagnosis of an Eberth bacillus appendicitis in the case we are considering plausible. The appendicular phenomena disappeared quickly and completely with the crisis of the pulmonic affection. It is more than probable that this was another case of "pneumococcic appendicitis."

DISCUSSION.

Dr. R. E. Tomlin: Dr. Snader has given us a brilliant, scholarly and invaluable paper; brilliant in that he has brought to our attention very salient facts, and in a very conspicuous manner the signs and symptoms with which we want to become familiar; scholarly in that he had moulded them with language easily comprehended by all; invaluable in that with the increased intelligence acquired from hearing or reading this paper we will be better fitted to attend cases. Apropos of the difficulties of diagnosis in these cases, I would like to cite two. About seven years ago my little girl, then about five years old, contracted what seemed to be ordinary grippe. The case progressed in a way that was not pleasant. It seemed, as further investigation was made, that there were other complications. A careful examination revealed the typical spots and other symptoms of typhoid fever. It was then believed we had a bronchial pneumonia supervening upon typhoid. Several very excellent diognosticians

and prescribers were invited to see her, among others, Dr. Snader. The case became very critical. Dr. Snader after a very thorough examination made the pronouncement that she not only had typhoid fever but bronchial pneumonia, a bronchial pneumonia, which he discovered on the lower right side, and which had not been discovered by myself or other friends. The child became so critical later that I simply watched by her side for her to die. Her eyes even became pink. The different treatments for her condition that were suggested were followed. The longer I studied into her case the more it became evident to me that the pulmonary lesion was the more prominent one, and the one requiring the most careful treatment; so after most careful thought on the matter I prescribed Ferrum phos. Various other typhoid and pneumonia remedies had been suggested, but without result, and Ferrum phos., the third decimal potency, was continued, supplemented with liquid peptonoids, and carried the child from what seemed certain death to a sure and permanent recovery. Another case. A doctor had been attending a diphtheria, and while attending that case was called on to attend a child about five months old. Going in to see this child, the people had been using onions about the child, and as a result a very unpleasant odor was present in the room. The child was living in a neighborhood thoroughly infected and infested with diphtheria. Inside of twenty-four or forty-eight hours this child died. There were several physicians in attendance. The case was pronounced as having died from diphtheria. As I have thought of the case and thought of the statements of the doctors attending the case, I have become convinced the case was not diphtheria at all, that there was no membrane discoverable in the throat, but that it was simply one of pneumonia, and the doctor attending it, although a good physician, was led to think of diphtheria because he was treating diphtheria, it was in a neighborhood where so much diphtheria was present, and the offensive odor of the onions deceived him. So I think the facts in the paper ought to help us to more clearly recognize these difficulties and be more alert in our examinations.

Q. I would like to ask Dr. Snader what line of remedies or what particular remedy the last case he mentioned was under at the time that the symptoms of appendicitis disappeared? As the symptoms from that point seemed to indicate Bryonia or remedies in that class, I wondered if such remedies were used. Frequently symptoms

of appendicitis do disappear under the action of such remedies as Bryonia.

Dr. Snader: I really forget the medical treatment given by the very careful prescriber. I would not like to answer that question offhand.

Q. I would like to ask Dr. Snader the age of the child. I have found the same conditions up to fourteen years in one case.

Dr. Snader: The question is rather difficult to answer, because it is quite possible for all the physical phenomena I have mentioned as occurring in childhood to occur also in an adult, but in order to confine the discussion to the Bureau of Pædology I preferred to consider pneumonia of children. Most of the data, so far as physical signs were concerned, were drawn from children who could not talk at all, or very little, or even were in arms. I think if you want to set any age puberty is just as good as any other. I advanced some very peculiar ideas I would like the members of the society to think about in connection with the possible origin of certain cases of meningitis and certain cases of appendicitis which are so closely connected with the diagnosis of the affections of childhood. We are so in the habit of thinking when we go into a sick room that we are going to get concrete diseases, and before we get through we have three or four on our hands.

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